ABSTRACT

The Personality Assessment Inventory Treatment Scales as Predictors of Recidivism in Female Penitentiary Inmates

by

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M.S. Psychology, Eastern Washington University, 1986

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This is to certify that the doctoral dissertation by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Abstract

According to the gendered pathways theory of criminal behavior (Daly, 1994) females generally commit crimes for different reasons than males. The gendered pathways theory also questioned the accuracy of actuarial tools that are used to predict recidivism of women who are imprisoned since the majority of these tools have been developed based male inmates. While they have been found to predict recidivism among male inmates, none of these tools have been found to accurately predict recidivism in female inmates. The Personality Assessment Inventory (PAI) is a personality assessment that has been normed on both males and females, including those in correctional and is currently used in many correctional facilities. This study examined the predictive ability of the Treatment Consideration Scales of the PAI on 474 female penitentiary inmates. A Cox proportional hazards analysis was utilized to determine if scores on the PAI Treatment scales varied according to time to either return to or staying out of prison. Elevated Treatment Rejection subscale scores were found to have an inverse relationship with recidivism, regardless of cultural background or type of crime. Higher Nonsupport scores were associated with increased recidivism, suggesting that female offender's successful reentry is linked to effective support systems. Support was also found for research linking increases in age with decreasing recidivism. This study validated the PAI as an important tool for assessing recidivism risk among female inmates. It also emphasized the need to consider gender differences when interpreting the Treatment Rejection subscales of the PAI as higher scores indicated lower risk of recidivism when the alternate would be expected based on male norms. The social implications of this study affect both the offenders and correctional entities. Those who score higher on the Treatment Rejection scale, those with strong support systems and older female inmates are less likely to recidivate. These inmates could be targeted for less restrictive and therefore less expensive custody settings which would allow for earlier release and reintegration into their communities and with their families.

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Dedication

This dissertation is dedicated to my husband, Anthony Marks and to our children, Sarah, Isaac, Angel, and Penny. You are the greatest blessings in my life. This is also dedicated to my father, Donald Cole, an intellectual, writer and observer of human nature in his own right. He instilled in me as a child a love of the science of psychology, but life circumstances prevented him from advanced study. I wish to thank my mother, Ruth Cole, from whom I inherited a stubborn determination to push forward even when it seemed impossible to do so. Finally, to my beloved friend Mister, who, after nearly 15 years of a life of love and dedication to his family, did not get to finish this journey with me..He was a constant reminder to me that the love for others and the love from others are the only two things that really matter.

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Chapter 1: Introduction to the Study

Introduction

The number of women in prison experienced a six-fold increase during the decade between 1985 and 1995 (Chesney-Lind & Pasko, 2004; Warren, Gelb, Horowitz, & Riordan, 2008). With the enactment of "get tough" drug laws and mandatory sentencing in the 1980s, women who were previously spared prison sentences based on duties to family and children, began to experience incarceration as frequently as males for the same crimes (Chesney-Lind & Pasko, 2004).As a result, the number of incarcerated women has grown steadily at a brisk pace as compared to men (Chesney-Lind & Pasko, 2004; Warren, Gelb, Horowitz, & Riordan, 2008). In the 1990s alone, the number of women in prison rose 23% compared to 13% for men (Harrison & Karberg, 2002). The United States incarcerates more females than any other country in the world, estimated at more than 186,000 in 2006 (Hartney, 2006).

After completing their prison sentences, a large proportion of releasees are reincarcerated. The recidivism rates of both males and females in the United States remain high with the majority of released offenders returning to prison 3 to 5 years from their release (Marbley & Ferguson, 2005; Warren et al, 2008). Langan and Levin (2002) tracked 272,111 offenders released from prison for 3 years and found that nearly 30% of them were rearrested within the first 3 *months* after release. More than 67% of these offenders were rearrested at least once within the 3-year observation period (Langan &

Levin, 2002). The recidivism rates for women were somewhat lower than that for males, but were still described as being of concern (Langan & Levin, 2002). Aborn (2005) offered an estimated 3-year recidivism rate of 57%.

This rate of recidivism, coupled with the United States' high incarceration rate, has created a burgeoning prison population in the United States. Many believe that the United States prisons have become an overcrowded, expensive, and unsustainable system (Corrections Digest, 2006; Hartney, 2006). As a result of this increasing population in prisons, the management, assessment and classification of offenders and interventions for offenders have become among the most important of undertakings of any correctional institution (Brennan, 2007).

There is no overarching theory of criminal behavior that can explain why people commit crimes in the first place or repeat criminal behavior and return to prison (Byrne & Trewe, 2008). In an attempt to develop a theoretical basis, researchers and criminal justice practitioners have focused primarily on male offenders (Folsom & Atkinson, 2007, Coulson, Flacqua, Nutbrown, Giulekas, & Cudjoe, 1996; Daly 1994). As a result, far less research is available on female offenders. While this dearth of studies was driven by a greater number of men in prison, it was as much due to the assumption that females and males followed the same pathways to criminal behavior and had the same reasons behind recidivism (Rumgay, 2004).

These assumptions that males and females followed the same pathways to criminal behavior and had the same reasons for returning to prison have met challenges. The National Institute of Justice ([NIJ], 1998) released a special report on female offenders that emphasized the differing needs between male and female offenders (Morash, Bynum, & Koontz, 1998). They attribute these differences to females' disproportionate levels of victimization from sexual or physical abuse and their added responsibility for taking care of their children (Morash, et al, 1998). Since then, other factors have been found to affect recidivism rates in females more than in males. These factors include race, age, family support, social support, type of crime, and mental health status and/or substance abuse treatment (Messina, Burdon, Hagopian, & Prendergast, 2006; Rumgay, 2004, Daly 1994). These factors will be discussed at length in chapter 2 and have informed this current study.

Morash, Bynum, and Koontz (1998) further reported that parity between programs to prevent recidivism that were offered to women and men was difficult due to the small number of women as compared to men in the justice system. According to Morash et al (1998, p. 2) "Their needs can easily be overlooked when programs are designed and resources allocated". Additionally, women offenders often underestimate the support they will need after release and face a higher risk of economic, social, and psychological challenges when they return to society (Bloom, 2004; Rumgay, 2004).

Statement of the Problem

The research problem proposed in this study was the identification of a recidivism risk assessment instrument that is valid for use with the rapidly growing population of female offenders. Reducing recidivism is a mandatory component for accessing government funding for certain offender programs (Second Chance Act of 2007). The instruments currently used for determining risk for recidivism are largely actuarial in nature and, once assumed to be "gender neutral"; however, research has suggested that these instruments may, in fact, be of limited value with the female population. Coulson, Flacqua, Nutbrown, Giulekas, and Cudjoe (1996) reported that one widely-used measure, the Level of Service Inventory-Revised LSI-R, is inaccurate for women and they recommended that it not be used with female offenders. They further reported that another measure, the Statistical Inventory on Recidivism-Revised (SIR), is equally inaccurate with that population and as a result, its use has been discontinued (Coulson et al, 1996). These instruments, they pointed out, did not take into account the evidence suggesting that female and male offenders differ in important risk factors (Coulson et al, 1996). They further pointed out that over reliance on any type of actuarial instrument can lead to errors in the risk assessment process and can result in inappropriate treatment or poor response to interventions aimed at preventing, among several areas of concern in corrections, recidivism (Brennan, 2007).

Given the inherent shortcomings of the currently available recidivism risk assessment instruments such as the LSI-R when used with female offenders, as well as the lack of research aimed at female offenders in all areas of risk, few options exist. As a result, there exists a gap in the literature regarding alternative instruments that may be used to identify female offenders who are at risk for recidivism. The Personality Assessment Inventory Aggression subscale ([PAI], Morey, 1991) has been investigated on a preliminary basis as a predictor of female recidivism (Salekin, Rogers, Ustad, & Sewell, 1998). The Treatment Scales, in particular, measure several factors that have been found to contribute to female recidivism but have not been directly investigated as an alternative to currently used recidivism risk assessment tools (Salekin et al, 1998). Through this study, I proposed to address this gap and to investigate the PAI Treatment Consideration scales as an alternative to the instruments currently used in the penitentiary system with female offenders.

Purpose of the Study

The purpose of this quantitative study was to investigate the predictive validity of the Treatment Consideration subscales of the PAI, an instrument that is already widely-used in clinical and correctional settings. The Treatment Consideration scales were investigated for validity in identifying those female offenders at a state penitentiary who were released from prison between January1, 2006 and August 9, 2010, and were as such, at risk for recidivism during that period. The Treatment Consideration subscales were

chosen as they align with several factors from the literature that have been linked to female recidivism or success upon release (Messina, Burdon, Hagopian, & Prendergast, 2006; Rumgay, 2004). The likelihood of recidivism was measured by a time to event survival analysis, the Cox regression (also referred to as the Cox proportional hazards model), based on the time from release to rearrest leading to reincarceration or remaining out of prison through the observation period.

Design of the Study

The PAI Treatment Consideration scales scores of female state penitentiary inmates who were released and returned to prison (recidivate) to those who remained out of prison during the observation period were compared in this study. Archival data were utilized in this study of female felony offenders who were administered the PAI between January 1, 2006 and December 31, 2006 and who were subsequently released from prison between January, 2006 and the end of the observation period, August 9, 2010. Recidivism and selected demographic data were provided by the Washington State Department of Corrections DOC Research staff and data who then returned deidentified data for analysis in this study. Data were analyzed using a Cox proportional hazards analysis. The resulting hazards ratio will assist in identifying high-risk female offenders based on their Treatment Consideration scale scores and who may then be provided with appropriate recidivism-reduction interventions. By identifying those at risk for

recidivism, resources can be allotted sooner and more effectively, thus reducing their chances of returning to prison.

Research Questions and Hypotheses

The following question was proposed in this study: After controlling for race, type of crime committed, and age upon release, is there a significant difference in scores on the Treatment Consideration scales on the PAI between female offenders who recidivate during the observation period and those who do not?

Preliminary research on males and limited research on females has indicated that clinical tools such as the PAI offer predictive data in determining the risk of recidivism. Therefore, the following research questions and hypotheses were proposed for this study:

Research Question 1: After controlling for the specified demographics of age upon release, race, and type of crime, are the Treatment Consideration subscales significantly predictive of recidivism, as measured by time-to-event analysis?

$H_1 1$: The coefficient of Treatment Consideration Aggression subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0 1$: The coefficient of Treatment Consideration Aggression subscale using the proportional-hazards recidivism-free survival model will not be significantly different

from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$2 The coefficient of Treatment Consideration Suicide subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$2 The coefficient of Treatment Consideration Suicide subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$3 The coefficient of Treatment Consideration Stress subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$3 The coefficient of Treatment Consideration Stress subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$4: The coefficient of Treatment Consideration Nonsupport subscale using the proportional-hazards recidivism-free survival model will be significantly different from

zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$4: The coefficient of Treatment Consideration Nonsupport subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$5: The coefficient of Treatment Consideration Treatment Rejection subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$5: The coefficient of Treatment Consideration Treatment Rejection subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

A more detailed discussion of the nature of this study and the nature of the hypothesis is included in chapter 2.

Theoretical Frameworks

Morey (2007) stated that the PAI was not based on any theory, but, rather, was developed based on empirical and clinical data. The predictive validity of clinical instruments including the PAI in determining the outcome of incarcerated individuals has

been investigated by several researchers including Caperton, Edens, and Johnson (2004), Maruish, (1999), Monahan (1981), Morey and Hopwood (2006), Skopp, Edens, and Ruiz (2007), Walters (2003), Walters, Diamond, Magaletta, Geyers, and Duncan (2007), and Walters and Duncan (2005). Preliminary findings support the Aggression scales of the PAI Treatment Consideration scales as an indicator of psychopathy in female offenders, and as an indicator of risk of recidivism and institutional adjustment, which has been linked to postrelease outcome (Skopp et al, 2007; Walters, 2007; Walters, Diamond et al, 2007; Walters & Duncan, 2005). In addition to being supported by preliminary findings, the PAI Treatment Consideration scales in particular and the selected demographics were chosen as the indicators of recidivism for this study as they aligned with the Gendered Pathways theory proposed by Daly (1994).

Daly (1994) asserted that women and men differ in the reasons they commit crimes, and that they experience life differently, occupy different social roles, have different expectations, and face different challenges upon release. Daly believed that current criminological theory, developed primarily from data on male offenders, did not take into account the gendered pathways and did not adequately inform sentencing and intervention of female offenders and offered the gendered pathways theory as an alternative. Several studies further supported Daly's findings, including Coulson, Flacqua, Nutbrown, Giulekas, and Cudjoe, 1996; Folsom and Atkinson, 2007; Walters et al, 2003; and Wang et al, 1997. Other researchers have identified additional factors that

differentially affect the ability of males and female to avoid recidivism (Messina et al, 2006; Rumgay, 2004; Salekin et al, 1998).

As a result of gender differences, Daly (1994) and others asserted that many actuarial instruments, such as the LSI-R, are not effective measures for outcome in women offenders. Researchers have suggested that the PAI may offer an alternative that is consistent with the gendered pathway theory and that reflects the differences between men and women's reasons for returning to prison (Coulson et al, 1996; Folsom & Atkinson, 2007; Maurutto & Hannah-Moffat, 2006; Walters et al, 2003; Wang et al, 1997).

Definitions of Terms

For the sake of clarification and to orient the reader, the following terms and definitions are provided:

Actuarial measures: Actuarial methods allow evaluators to make decisions, typically demographic and historical in nature, based on data that is coded in a predetermined manner (Meehl, 1954). The Levels of Service Inventory-Revised (LSI-R) is one example of an actuarial instrument.

Criminal Justice System: The institutions, organizations, and people that are involved in the apprehension, prosecution, incarceration, and supervision of those who have committed crimes (Garland, 2002).

Gendered pathway theory : This theory, first proposed by Daly (1994), is based on the feminist criminology model, the premise of which is that men and women enter and maintain criminal behavior for different reasons. Daly asserted that women's roles in society placed them at a higher risk for abuse and victimization, that women were economically marginalized more frequently than men, that women were relationship-driven and that female offenders suffered a higher level of mental health and substance abuse issues.

Offender: An individual who has been convicted of breaking the law and is under the jurisdiction of the criminal justice system (Garland, 2002).

Recidivism: For the purposes of this study, recidivism is defined as rearrest, leading to reincarceration in prison for an offense within 3 years after release from prison (Maltz, 1984, 2001; Wormith, Althouse, Simpson, Reitzel, Fagan, & Morgan, 2007).

Recidivism-free survival time: The interval from release from prison to first re-arrest leading to incarceration in prison.

Assumptions and Limitations of the Study

Some key assumptions and limitations may impact this study. The first assumption is that the PAI was administered correctly and the participants answered the test questions honestly. Although any protocols that contained scores of 75 or above on the Infrequency, Inconsistency, Positive Impression, or Negative Impression scales will

be omitted, there is always a chance in self-report inventories that the scores may be exaggerated or minimized. The second assumption is that the PAI, which was normed on a sample that mirrored U.S. demographics, is not affected by the race, gender, age, or other demographic factors and that it is accurate across cultural subgroups (Morey, 1991; Morey, 2007).

A limitation of this study involved the definition of recidivism itself. Researchers have yet to agree on a universal definition. Acceptable definitions range from relatively minor technical parole violations to committing a new offense to committing the same offense for which the individual was previously incarcerated (Maltz, [1984] 2001, Wormith et al, 2007). Further, acceptable timelines within which recidivism is considered to have occurred also vary from any time period beginning immediately upon release to a specific number of years indicated by a particular study or within the individual's entire lifespan (Maltz, [1984], 2001); Wormith et al., 2007). It is possible that different results might occur if recidivism was defined differently or other timelines examined.

Significance of the Study and Implications for Social Change

The cost of recidivism is high, whether measured in dollars or human life. While reentry is a difficult prospect for any offender, females often enter prison with higher levels of preincarceration trauma such as sexual abuse, more severe levels of substance abuse, and higher levels of mental illness (Bloom, Owen, & Covington, 2003; Daly,

1994; Lord, 2008; Morash, Bynum, & Koons, 1998; Nee & Farman, 2005; Obedallah & Earls, 1999; Wahl, 1993; Warren, 2003). Without intervention, they are released with these same challenges and, typically, children to care for as well (Brown, 2003). Brown (2003) found that generally most female offenders underestimate the amount of support they need, and as a result they may have a difficult time advocating for themselves.

There remains a gap in the literature on female offenders to inform assessment of female recidivism specifically and to assist in the design of more effective programming. Consequently, there are few or no options to the risk assessment instruments discussed above. The social implications of identifying an option to currently used risk assessments are many. Females who are overidentified by the current classification systems often lose out on opportunities while incarcerated that could help them stay out of prison after release (Maurutto & Hannah-Moffat, 2006). Those who are underidentified release to the same problems that faced them prior to incarceration and lose out on potentially helpful prison programs (Maurutto & Hannah-Moffat, 2006). Accurate identification of those offenders who are at high risk assists in the design of interventions specifically aimed at reducing their chances of failure and recidivism once released (Maurutto & Hannah-Moffat, 2006). This may result in more wisely spent program dollars and less waste of precious resources (Maurutto & Hannah-Moffat, 2006).

The social implications of recidivism do not stop at the individual woman, however. Seventy-five percent of incarcerated women have children (Evanson, 2008).

The average age of children of an incarcerated mother is 8, while 22% of the children of incarcerated mothers are 5 years of age or younger (Evanson, 2008). The children of female offenders have been shown to require more frequent and longer foster home placements, often "aging out" of the system, that is, staying until the age of 18 (Brown, 2003; Evanson, 2008). These children tend to have more mental health problems, learning problems, and self-esteem problems than peers of nonincarcerated parents (Brown, 2003; Evanson, 2008). Kennedy (2007) suggested that children of incarcerated parents were seven times more likely to end up in prison themselves and added that one study found that as many as 1 in 10 would be incarcerated before reaching adulthood. These children and other family members who rely on the releasees for support benefit from a more stable family unit, free of the revolving door of imprisonment and release that is the case of 57% of female offenders (Brown, 2003; Evanson, 2008, Kennedy, 2007). This, in turn, may possibly prevent children from following in their mother's footsteps and going to prison themselves (Aborn, 2005).

By providing female offenders with interventions to better care for themselves and their children, society will bear less of the social and monetary costs of failed families. These successfully reintegrated female offenders return to society and to the work force, thus contributing to society as opposed to drawing from it (Western, Kline, & Weiman, 2001).

Summary

Female offenders are the most rapidly increasing population in the prison system (Cropsey, Wexler, Melnick, Taxman, & Young, 2007). Management, placement, and treatment are urgent needs in corrections. Researchers have challenged the assumptions that males and females commit crimes or return to prison for the same reasons and require the same interventions to remain out of prison (Cropsey et al, 2007).Researchers have indicated that measurements of risk commonly used in corrections may have limited accuracy when used with women (Brennan, 2007, Rumgay, 2004;.Coulson, Flacqua, Nutbrown, Giulekas, & Cudjoe, 1996).

Clinical instruments that are currently used in the correctional setting have been investigated as alternatives to actuarial measures and some have been shown through preliminary research to predict certain factors of concern, such as institutional maladjustment and recidivism (Walters, Diamond, Magaletta, Geyers, & Duncan , 2007; Walters & Duncan, 2005; Salekin, Rogers, Ustad, & Sewell, 1998.). The PAI is one such instrument (Walters et al, 2007; Walters & Duncan; 2005, Salekin et al.,1998) and is the focus of this study. The Treatment Consideration Scales, in particular, were chosen as these subscales measure factors that have been shown in the literature to contribute to female offenders' return to prison (Rumgay, 2004; Daly,1994).

An overview of current criminal theories is provided in chapter 2. The Gendered Pathways theory is discussed, as well as differing factors that drive female offenders to

return to prison. The limits of actuarial instruments in the correctional setting, particularly when used with female offenders, are discussed. The use of clinical tools, including the PAI as an alternative in the correctional setting, is further explored. The support for the choice of the Treatment Consideration scales as an area of investigation and the link to factors affecting female recidivism is presented. Gaps in the literature that give relevance to this study are discussed.

The methodology of the study is presented in chapter 3 and a more detailed description of the technical aspects of the PAI will be included. Detailed description of the population, the sample, research design, and statistical analyses will also be included. The results of the study, a review of the findings, and further exploration of the study's hypothesis are provided in chapter 4. A discussion of the study's findings, an interpretation of the findings, implications for social change, and recommendations for further action and study are included in chapter 5.

Chapter 2: Review of the Literature

Introduction

This literature review begins with a review of female incarceration in the prison system. It continues with a discussion of recidivism of female offenders and a discussion of the difficulty defining and studying recidivism in the general prison population. The third section includes the limitations of risk assessment instruments currently used in the correctional system and the lack of research upon which to base the development of instruments and programs. The limitations of current theories of criminality and the concept of the gendered pathway into crime are discussed in the fourth section . The last section includes the use of clinical assessment tools as an alternative to determining risk of recidivism, given the factors put forth in the previous four sections. The PAI is discussed in terms of its theory and gender neutral foundation. Preliminary research is discussed that suggested the PAI might have potential in predicting risk for such factors as institutional misconduct and recidivism in female offenders.

This review was conducted using books on the research topic and related topics, assessment tool manuals, and articles obtained through an online search of the following databases: Academic Search Premiere, PsycARTICLES, PsycINFO, SocINDEX, Whitman College Library database system, and the Criminal Justice Periodicals. The following key words were utilized: *Personality Assessment Inventory, female offenders, female prisoners, female inmates, risk assessment, recidivism, desistance, institutional*

adjustment, gendered pathways, and *criminal theory models.* After the initial key word search, more specific searches were conducted. Further articles were explored from reference lists of researched articles and bibliographies related to correctional assessment tools, the PAI, and male and female offenders. Statistical information was gathered from searches of the Bureau of Justice website and the Washington State Department of Corrections website.

Overview

Prison populations have shown a significant increase over the past several decades. Female offenders, while still the minority as compared to men, have shown the largest increase in numbers in both incarceration and recidivism (Bonczar, 2007; Piper-Deschenes, Owen, & Crow, 2007; Beck, 2001)..While many male offenders are married or have female significant others to care for their children, female offenders are usually single heads of household and have custody of minor children (Belknap, 2007; Belle & doucet, 2003; Rumgay, 2004). Some have suggested that these children are adversely impacted by their mother's incarceration and more likely to repeat the cycle of criminality (Kennedy, 2007). The recidivism of female inmates affects not only the offender herself, but often her children and families (Kennedy, 2007).

Predicting who will return to prison is essential in order to provide pre and postrelease interventions and support and help break this cycle of criminality. Accomplishing this is difficult as there is no unifying theory of criminality from which to

draw and those available have been developed primarily by studies on males. (Byrne & Trewe, 2008). The actuarial instruments currently used to determine the odds of returning to prison have been largely developed from data of male offenders (Bloom, 2004; Bloom, Owen & Covington, 2003). While they have been shown to have fairly reliable predictive validity with male inmates, many have questioned their applicability to women(Bloom, Owen, & Covington, 2003;Blanchette, 1997; Coulson et al., 1996)..

In a response to the differences many observed in female and male offenders, Daly (1994) introduced the concept of a gendered pathway theory. Daly believed that the most salient of differences in levels of criminal behavior—gender—was patently ignored by lawmakers and the correctional system. Daly (1994) identified several subtypes of female criminal as well as several precursors that were linked to female crime. Subsequent research has supported her findings and gendered differences leading to crime and recidivism between male and female offenders continue to gain momentum in the correctional system (Belknap, 2007; Rumgay, 2004).

Clinical instruments have been investigated as an alternative to actuarial measures. The PAI is one such clinical instrument and has shown promise in predicting such factors as institutional adjustment as well as recidivism in female offenders, thus providing additional information upon which to develop interventions and reduce female recidivism. The Treatment Consideration Scales are of the focus of this study as they measure personality traits and emotional experiences that parallel many of the factors

identified by the gendered pathways theory. The PAI is explored as assessment of those traits that may lead a woman back to prison. Early identification offers a chance for additional intervention and avoids the dual problem of either over or under classification of risk for recidivism, common with most actuarial tools currently used.

Increasing Rates of Female Incarceration

For the first 50 years of the 20th century, incarceration rates remained at a relatively stable level of about 110 per 100,000 population (Blumstein & Beck, 1999). Although violent crime rates have fallen over the past several years, the number of individuals behind bars in state and federal prisons has been marked by an unprecedented growth in the last 30 years (Cropsey,Wexler, Melnick, Taxman, & Young, 2007; Harrison & Beck, 2005). The prison population in the United States grew around fourfold between 1980 and 1990 (Harrison & Beck, 2006). By midyear, 2007, the number of offenders over which state and federal correctional authorities had jurisdiction totaled 1,595,034, an increase of about 140,000 from 2002 (Harrison & Beck, 2006). State prisons incarcerated the largest percentage of these individuals, about 87.5% of the total (West & Sabol, 2008).

Today, the United States incarcerates more prisoners than any other country in the world with a rate approximately four times that of the rest of the world (Hartney, 2006). The incarceration rate per 100,000 in the United States was 738, followed by a rate if 607 per 100,000 in the Russian Federation and 498 per 100,000 in the communist country of

Cuba (Hartney, 2006). Some states in the United States have incarceration rates that are up to six times higher than countries of similar-sized populations (Hartney, 2006). The United States also incarcerates more women than any other country in the world (Hartney, 2006).

The current prison system is not sustainable. Prisons face overcrowded conditions and many have been sued for failure to meet minimum care standards (Hartney, 2006). The cost of incarcerating individuals has become a focal point in corrections, with a particular emphasis on those who, once finished serving their sentence, commit another crime and return to prison again and again, leaving officials and citizens wondering what, exactly, they are paying for (Corrections Digest, 2006). In speaking of the California Department of Corrections and Rehabilitation, Unger stated "We're out of space, and we're out of money. It's time to reform the system" (as cited in Herdt, 2009, p. 1).

Rising Female Incarceration Rates

The number of incarcerates of both genders has grown significantly since the 1980s, but the proportion of female offenders has increased dramatically. Blumstein and Beck (1999) reported that the population of female offenders grew the fastest, about 364%. As a result, the number of females in prison represented 6.4% of all incarcerated offenders in 1998 and increased to 17% by 2004 (Bloom, Owen, & Covington, 2003).

Other researchers offered similar findings, estimating that the number of women entering the prison system has grown at a rate of two to three times that of male

offenders, and women incarcerates are at nearly double the rate for men over the past 2 decades (Beck 2000; Irwin, 2005; Karberg & Beck, 2004; Sabol & Couture, 2008). Bloom and Chesney-Lind (2000) estimated that the number of female incarcerates increased threefold between 1990 and 2000. Sabol and Couture (2008) reported an increase in female inmates from 93,234 to 115,308 between 2000 and 2007, representing an 87% increase of females in prison as compared to a 12.5% increase in the male population for the same period. The same trend continued in 2008, with the number of male inmates increasing by .08% from 2007 levels and the number of females increasing by 1.2% from 2007 levels (Christian & Thomas, 2009; Sabol & Couture, 2008).

Increased Female Recidivism Rates

In addition to increasing prison costs, the United States has a national rearrest rate of 67% and a reincarceration rate of 52% within 3 years after release (Langan & Levin 2002). This rate rose, despite an overall reduction in crime (Camp & Camp, 2002).

Although recidivism rates vary when comparing women to men, some findings suggest women have a higher or comparable rate. Aborn (2005) estimated that female offenders have the highest recidivism rate of the correctional system relative to their numbers. Aborn (2005) found that of the approximately 177 female offenders who are released from prison each day 57%, or approximately101 of these individuals, return to prison within the first 3 years. In 2004, Washington State reported a somewhat lower rate for women than for men, between 17.6% to 45.6% for males compared to 3% to

33% for females, depending on type of crime, with most women falling in the 33% group (Washington State Department of Corrections [WSDOC], 2004). Langen and Levin (2002) described the rate for the female offenders as being lower than that of males, but still of concern. In a reanalysis of a 1994 USDOJ data set of 23,562 female offenders, Piper-Deschenes, Owen, and Crow (2003) found that females showed a rearrest rate that was not considerably lower than males (60% females versus 70% total sample) and similarly, only a slightly lower prison reincarceration rate for females as compared to males (30% females versus 37% males), which suggested nearly equal risk of rearrest and recidivism between males and females.

Less Research on Female Offenders

When reviewing the literature on criminal behavior and recidivism, the lack of research on female offenders quickly becomes apparent. Despite the increasing numbers of female offenders, there is a lack of research on this population. Harris (1993) conducted research comparing in-prison stressors felt by female offenders and male offenders. Harris cited an even earlier researcher, Rose Giallombardo, who observed 25 years earlier in 1966 that:

> The literature on women's prisons and the female offenders is long on impressions and short on empirical data...Unfortunately, the scientific description and analysis of the female prison and female prisoner have been overlooked. Rare exceptions may be noted (Giallombardo as cited in Harris, 1993, p. 43).

Harris (1993) further stated that while research on female inmates is no longer "rare" as stated by Giallombardo, it is the exception to the rule. Although the female prison population has grown, there is much less research on female offenders than on males (Brennan, 2007; Messina, Burdon, Hagopian, & Prendergast, 2006; Salekin, Rogers, Ustad, & Sewell, 1997; Skopp, Edens, & Ruiz, 2007).

Brown (2003) stated that the lack of research was due to neglect by correctional experts throughout the years. Brown (2003, p.1) referred to females as "forgotten offenders," occupying the lowest of the castes in the prison system. Brown (2003) believed that both female offenders , and the prisons in which they resided, were ignored by society and scholars. Although Brown (2003) attributed this neglect due in part to their smaller numbers as compared to males, approximately five % of the U.S. prison population, he further asserted that this neglect is also due to the male viewpoint dominating the field. Brown (2003) described U.S. penitentiaries as being developed under the direction of male legislators, and primarily for male corrections agents whose main state and federal duty is to contain and control the United States' male prison population. The resulting institutions are not designed for females in the penitentiary system and accommodations, such as bathing facilities, and recreational, educational, and vocational opportunities have been either absent or developed at a slower pace than for males (Brown, 2003). As the female prison population seemingly "exploded" at the

beginning of the 21st century, Brown (2003) concluded, prisons are being forced into developing more appropriate environments for female prisoners.

Statistics on the proportion of female to male offenders support Brown's (2003) assertion. Recent estimates are that there are 1,595,034 prisoners in the United States: 1,479,726 are males and 115,308 are females (West & Sabol, 2008). Although the numbers for women have increased threefold in the past 10 years, there continue to be many more males in prison, making that gender both more salient and easier for researchers to access (Brown, 2003; West & Sabol, 2008). Another factor that may explain this disparity of effort in research was the long-held assumption that males and females differed little in their criminal behavior (Brown, 2003; Giordano, Cerkovich, & Rudolph, 2002; Rumgay, 2004). As the risk assessment instruments used in many prisons were also developed on this assumption (that males and females enter and stay in crime for the same reasons), their accuracy began to be questioned by some (Brown, 2003; Giordano et al. , 2002; Rumgay, 2004; Daly 1994).

Gender Excluded in Theories of Criminal Behavior

It was not until the early 1990s that researchers such as Daly (1994) began questioning this assumption that the differences in male and female criminal behavior as well as the accuracy of the instruments used to assess both genders became apparent. Daly (1994) began questioning traditional theory as an explanation as to why women commit crimes and return to crimes after release from prison. Years later, Belnapp (2007)

noted that gender, one of the most accurate predictors of the probability of criminal behavior has been systematically ignored by most theorists, with race and age at release as two other highly predictive factors. Belnapp (2007) asserted that as long as these factors were not included in risk assessment, they were likely to remain inaccurate as predictors for recidivism, particularly for female offenders.

Review of Classical Criminal Theory

The field of criminology does not endorse an overarching causal theory of criminality (Byrne & Trew, 2008). Social, individual, economic, biological, and environmental causes are variously pointed to as the basis of crime (Byrne & Trew, 2008; DeSanto-Haines, 2008; Nagin, & Sampson, 2008; Belknap & Holsinger, 2006; James & Glaze, 2006; Laub, Messer, Maughan, Quinton & Taylor, 2004; Morley & Hall, 2003).This is problematic for both researchers and those who develop programs, providing conflicting messages about where to concentrate the increasingly limited resources in the correctional system (Morton, 2007; Wormith, Althouse, Simpson, Reitzel, Fagan, & Morgan, 2007; Petersilia, 2003).

Walters (1990) reviewed the literature and determined that there were eight main theories of criminal behavior, each purporting a different level of external or internal, individual or societal causes. Table 1.0 provides an overview of eight models, or theories, of criminal behavior and associated factors. As is evident from the table, there is more disagreement than agreement regarding the nature of the individual, of criminal behavior,

and the means by which to change behavior from criminal to noncriminal. It is of note that much of the research contributing to the development of classical criminal theories has focused on males and gender differences were not considered (Messina, Burdon, Hagopian, & Prendergast, 2006; Rumgay, 2004). Based on the myriad of influences that appear to influence criminal behavior, Byrne and Trew (2008) asserted that universal theory of criminality is not likely to be developed.

Table 2.1

Eight Models of Criminal Conduct as Defined by the Four Fundamental Principles of a Theory

Theory	Nature of Man	Normal Development	Cause of Deviance	Implementing Change
Differential Association	Neutral	Modeling learning	Association with delinquents	Associating with non-criminals
Strain Theory	Positive	Pursuit of socially sanctioned goals	Disjuncture between goals and available means	Increased opportunity for everyone
Social Control	Negative	Internalized sense	Weak/broken bond to conventional social order	Attachment to the conventional social order
Labeling	Positive	Attributions and symbolic interactionism	Negative labeling experiences	Changes in criminal justice system's approach to deviance
Self Theories	Positive	Defining one's self relative to society	Implementation of a self-image consistent with crime	Challenging old beliefs about self and developing new self-identity.
Psychoanalytic Theories	Negative	Gratification of instinctual drives	Inadequate resolution of early conflicts result in either guilt or a weak superego development	Develop greater insight into the unconscious determinants of behavior
Pathological Stimulation Seeking	Neutral	Achieving an optimal level of sensory stimulation	Drive for increased levels of stimulation coupled with negative family experiences	Finding social appropriate outlets for stimulation seeking tendencies.
Rational Choice	Neutral	Maximizing gains and minimizing costs	The cost:benefit ratio for crime exceeds the cost:benefit ratio for non crime	Increase the cost of crime and/or increase the benefit of noncriminal behavior.

The Female Pathway into Crime

In the early 1990s feminist scholars began questioning the validity of current criminological theory as representative of female offenders. Observing that most of criminology was developed from a male point of view, they began to apply gender as a way to build theories about women's criminal behavior and victimization rather than developing general theories of crime (Daly, 1994). Evidence continued to amass that important differences between male and female offenders' pathways into crime, out of crime and return to crime, may not be numerous, but they are significant and cover a wide range of factors (Rumgay, 2004). These are discussed in more detail later in this chapter.

Others have found that, not only do women and men enter the system under different circumstances, but that the system treats them differently once imprisoned. The strict drug and sentencing laws and policies enacted in the early 1990s that lengthened sentences, required mandatory sentencing, and a generated a general "get tough" on crime attitude (1999).The United States saw a 200% in incarceration after enacting these laws (Blumstein & Beck, 1999). Brown (2003) found that women were unduly affected by these laws as female offenders are more commonly and more seriously drug-addicted and mentally ill than their male counterparts. Brown (2003) reported that prosecutors and law enforcement officials have responded to the increased rate of women committing crimes such as forgery and larceny with an increased willingness to prosecute and convict women. As a result, these officials often impose longer and harsher sentences on women

for breaking the law as compared to men who commit the same type of crime.(Brown, 2003). Brown (2003) asserted that women suffered higher levels of abuses based solely on the angry, moral judgments of prosecutors. Watterson's (1996) earlier findings suggested that differential prosecution has been a longstanding problem. Watterson (2006) concluded after interviews with more than 1,000 female inmates and prison officials, that female offenders were treated more harshly by the correctional system providing another area in which males and females are treated differently by the legal system.

Daly's (1994) findings are supported by others who work with female offenders. Cassandra Newkirk, chief psychiatrist for the Philadelphia Prison System, (2002) summed up the experience of working with female offenders as compared to working with males as a "rude awakening....a big eye opener" (as cited in Arehart-Treichel, 2002, p. 16). Newkirk (2002) and attributed this difference to women offenders entering into prison with different histories as compared to men, particularly in the area of sexual abuse and poverty. Many, Newkirk (2002) asserted, suffered from Post Traumatic Stress Disorder or depression.

Daly (1994) outlined different pathways that women take into criminal behavior by developing five general archetypes. These include street women, harmed and harming women, battered women, drug-connected women, and a category Daly termed "other," which included women who were economically motivated. The following is a discussion of each of these subtypes, with additional research supporting Daly's findings.

Street women. This category was characterized by a criminal history, usually extensive, an unstable and typically abusive childhood, and living on the streets as the result of either being kicked out of an abusive home or running away from the same (Daly, 1994), The street women usually dropped out of high school, became pregnant at an early age and typically ended up in the welfare system (Daly, 1994). Several subsequent studies have supported this pathway. Rumgay (2004) and Morash (2006) found that female offenders have a history of significant physical and sexual abuse as compared to their male counterparts. Often, they found, females escape this abuse by turning to life on the streets or illegal means of support such as selling drugs or prostitution.

Harmed and harming women: This group of women is characterized by a history of being physically abused, sexually abused and/or neglected (Daly, 1994; Morash, 2006). To cope with the resulting psychological problems, they responded with high levels of drinking, using drugs, and violence (Daly, 1994; Morash, 2006). Differing from the Street Women, they tended to act out violently and commit offenses such as assault, robbery, manslaughter, arson, and drug-related offenses. Lacking coping skills to deal with their life experiences, they passed the victimization they experienced onto others (Daly, 1994).

Battered women. This group was characterized by a limited criminal history, but who entered the system as a result of hurting someone in self-defense (Daly, 1994).

Drug-connected women. These women used and/or sold drugs. While recidivism

among men has been linked to abuse of alcohol, more often, it is drug abuse and addiction that has been most strongly linked to female recidivism (Benda, 2005). Although male and female prisoners show a nearly equal rate of drug use, female inmates are often more seriously affected by drug use (Bloom et al, 2003). These women demonstrate more frequent usage, more involvement of hard drugs, and more polysubstance abuse than males (Messina et al , 2006). The National Institute of Justice research brief on women offenders (Morash et al, 1998) reported that 54% of women versus 50% of men used drugs within a month before their offense. This link between women, substance abuse and crime is sufficient enough to make drug abuse treatment a critical need listed by jail administrators when queried for the National Institute of Justice research brief on women offenders (Morash et al 1998).

Sexual and Physical Abuse

Overall, females also show a more limited employment history and poorer psychological functioning than their male counterparts (Messina et al, 2006). This history makes routine events in prison, such as locking a female inmate in a single person cell or placing her in restraints, far more traumatizing to female inmates more than males. Sherer (2006) found that activities often stimulate memories of past abuse. In turn, these events often produced symptoms that resembled bipolar disorder when they were, in fact, likely experiencing Post Traumatic Stress Disorder (PTSD). Warren (2003) studied the baseline level of psychopathology in women prisoners and found very high levels of psychological disorders and distress. She determined that these often were formed before

incarceration and described the incarcerated female population as more similar to inpatient mental hospitals than the general population.

Lack of Services

Ram Canaan of the University of Pennsylvania School of Social Policy and Practice offered one possible explanation for recidivism: a lack of transitional services or "human capital" for ex-offenders (DeSanto-Haines, 2008). Canaan (2008) found that approximately 40,000 individuals are released from state, local and federal institutions into the Philadelphia region each year. These newly-released individuals joined the 200,000 to 400,000 who were previously released throughout the nation and who needed immediate assistance with mental health, education, substance abuse or shelter (DeSanto-Haines, 2008). Canaan proposed a nationwide coordination of services to address this as many of these services as well as spreading out resources beyond the major metropolitan areas of the United States. In support of Canaan's findings, Acting Corrections Secretary for the State of California, Jeanne Woodford, reported that reentry and drug treatment programs reduced California's one-year rate to a 25-year low (as cited in Corrections Digest, 2006).

Mandatory Sentencing Laws

Others, such as Susan Uhran of the Pew Charitable Trust, have asserted that policy changes are needed unless states want to face continuing reincarceration of released offenders (as cited in Corrections Digest, 2006). Although state demographics may play a small part in the increase, policies such as mandatory minimum sentencing,

reduced parole grants, and increased rates of returning parole and probation violators to prison (Corrections Digest, 2007). Brown (2003) pointed out that women have been unduly affected by the "get tough" drug policies. Brown believed that this was due to both officials being more likely to prosecute a woman for her crimes, and to often impose harsher punishment, but also due to the fact that female offenders are more commonly and more seriously drug-addicted and seriously mentally ill than their male counterparts.

Substance abuse treatment

Both the lack of drug treatment and facilities for the mentally ill have been offered as yet other causes driving return to prison (Banks & Gottfredson, 2004; Kennedy, 2007). Kennedy (2007) reported that nearly two-thirds of state prisoners were regular drug users at some point during their lives. Kennedy (2007) further reported that one-third had committed their "instant offense" or most recent crime while under the influence of drugs. A 2004 report authored by Mumola and Karberg and released by the Bureau of Justice Statistics supported Kennedy's further assertion that although drug addiction and abuse are key elements in the commission of many crimes, drug treatment was not readily available in the prisons. This report indicated that in 2003, less than half of the approximately 50 % of inmates who met the criteria for drug dependence or abuse participated in drug treatment programs once admitted to prison (Mumola & Karberg, 2004).

Mental Illness

Studies completed by James and Glaze (2006) for the Department of Justice estimated that between one-half and three-fourths of all prison and jail inmates were found to have mental health problems. Most of these were affected by disorders such as major depression, bipolar disorder and substance abuse (James & Glaze, 2006). Senator Ted Kennedy (2007) reported to the Senate in his introduction to the *Second Chance Act* that nearly 25% of state prisoners and jail inmates with a mental health problem had served three or more sentences prior to their current incarceration. The high rate of recidivism in this population would seem to necessitate mental health treatment. However, Senator Kennedy reported that two-thirds of inmates in state institutions did not have access to mental health care. Senator Kennedy echoed the sentiments of researchers who believe that it is these unresolved mental illnesses or drug addictions drive offenders to reoffend and return to prison (James & Glaze, 2006).

The lack of mental health treatment has been found to influence post-release success in both genders but important gender-specific differences have been recognized by researchers and practitioners. Much of the research has suggested that mental illness symptomology is expressed differently between males and females and may manifest differently in initial criminal activity as well as return to criminal activity. Benda (2005) concluded that feelings of aggression are linked to male recidivism, while a recent history of stress, depression, suicidality and fearfulness were found to greatly increase a woman's chances of returning to prison. These factors were found to significantly

decrease the chances of a successful post-release outcome (Bonta, Law, & Hanson, 1998; Messina et al, 2006). Zust (2009) stated that incarcerated women who have been the victims of domestic violence are at risk for depression, anxiety, PTSD, and suicide. Newkirk (2002) reported similar findings in the Philadelphia penal system.

Fazel and Grann (2006) found that severe mental illness did affect levels of violent crime based on gender and age differences. Fazel and Grann (2006) tracked the crime rates of patients who were released from hospitals in Sweden with diagnoses of schizophrenia and other psychoses and found that of the 45 crimes per 1000 committed in Sweden, only 2.4 of these crimes were committed by an individual with one of these diagnoses. Further, the risk factor for mentally ill women to commit crimes was found to be higher across all age groups they studied (Fazel & Grann, 2006). Women over the age of 40 were the highest risk group, committing 19% of the 45 crimes, and women ages 25-39 committing 14% of all crimes in their sample (Fazel & Grann, 2006).

Zust (2009) pointed out that recidivism in adult female offenders is linked to depression. Other researchers findings suggested that this link may be apparent far earlier than adulthood in both genders and that gendered differences are present (Chiles, 1980; Duclos, Beals, Novins, Martin, Jewett, & Manson, 1998). The role of depression has been closely linked to delinquent behavior, to type of offense committed (Chiles, 1980; Duclos et al., 1998). Ritakallio, Kaltiala-Heino, Kivivuouri, Luukkaala, and Rimpela (2006) compared the profile of offenses between depressed and non-depressed adolescents and found a delinquency-depression link with different patterns of offenses

committed by depressed adolescents and those who were not depressed. Adolescents who were depressed showed a greater variety of offences as compared to nondepressed adolescents (Ritakallio et al., 2006). Nondepressed adolescents typically specialized in only one type of disorder (Ritakallio et al., 2006). Gender effects were also found (Ritakallio et al., 2006). Between two groups of boys, the group of depressed boys who specialized in one type of offense only and non-depressed boys who specialized in violent offenses, depressed boys showed a greater variety of offenses(Ritakallio et al., 2006). Depressed girls, on the other hand, were most likely to commit vandalism while non-depressed girls were most likely to specialize in shoplifting (Ritakallio et al., 2006).

Personality disorders, such as psychopathy or sociopathy, have been found to be linked to higher crime rates in women as compared to men (Mulder, Wells, Joyce, & Bushnell, 1994; Robins, 1966; Salekin et al., 1997). Females were noted to have more overlap with sociopathy and hysteria (Robins) and to have less aggression, later onset and more sexual acting out than males (Mulder et al, 1994; Silverthorn & Frick, 1997). The traits of the psychopathic personality, a robust predictor of recidivism among male inmates, were found to be less common in female inmates and also to be a less reliable predictor of female recidivism (Hare, 1991; Salekin et al., 1997).

Type of crime

Women accounted for about 14% of violent offenders in the prison population, most commonly incarcerated for simple assault (West & Sobol, 2008). It is estimated that 75% of the violent victimizations committed by females were simple assault, as

compared to a 50% rate for that same crime among male prisoners (West & Sobol, 2008). One in 50 sex offenders was a female while one of fourteen robberies and one in nine aggravated assaults was committed by a female (West & Sobol, 2008). The U.S. Department of Justice conducted research on female offenders in 1998 and found that women were twice as likely as men to be serving a sentence for a violent offense, their victims most often someone close to them (Morash et al., 1998). Interestingly, the rate of females who commit murders has been steadily dropping since 1976, according to the Department of Justice report (West & Sobol, 2008).

Among types of offenses, property offenders of both genders were most likely to return to prison within one year, while sex offenders were least likely (Washington State Department of Corrections [WSDOC], 2004). Specifically, female property offenders were found to have a prison reincarceration rate of about 32% versus male property offenders' 47%, while approximately 17% of male sex offenders returned to prison compared to 3% of female sex offenders (WSDOC, 2004). The total reimprisonment rates were 33.1% for males and 23.5% for females (WSDOC, 2004)..

Of the offenders who committed the same type of offense as their original offense, females property offenders outnumbered males by about 5% (71.4% versus 66.6%), female drug offenders outnumbered males by about 2% (67.3 versus 65.7) and female sex offenders outnumbered males by about 34% (100% versus 65.5%) (WSDOC, 2004). Only males who committed person-related offenses outnumbered females in

recommission of the same type of crime as the original crime (55.6% versus 44.2%) (WSDOC, 2004).

These findings suggested that females are more likely to repeat their original offenses and suggest that females may require a more specific approach to address the reasons behind commission of their crimes and interventions to stave off repetition of those crimes. In terms of recidivism studies, including this study, property criminals are more likely to be overrepresented in the sample of recidivism if a short observation period is utilized. Due to this, type of crime will be controlled for in the final analysis of data.

Relationships

The chances of recidivism in both males and females have been linked to the type and quality of social ties. Those individuals who have more criminal peer associations tend to return to prison more frequently than those releasees who develop pro-social relationships (Benda, 2005; Smith, 2006).

The importance of the quality of relationships is perhaps best illustrated by the research of Leverentz (2006) and Laub, Nagin, and Sampson (1998). Marriage in particular, was a potent predictor of successful reentry for men. This was not found to hold true for women. Benda (2005) found that women were more likely to return to prison if they live with a criminal partner *and* live in an urban area. In addition, women often chose mates who were recovering drug users or ex-offenders and who faced a higher risk of recidivism (Laub et al.,1998).

The choice of criminogenic males often spills over into the actual commission of crime for most women offenders. Women offenders tend to commit crimes along with males, rather than alone or with another female (West & Sobol, 2008). Among violent offenders, 47% of males committed the violent offense alone, and 51% were with another male, while 53% of females committed their offense alone, 40% were with others and 8% were with at least one other male offender (West & Sobol, 2008). Only 1% of males committed a violent offense with a female offender (West & Sobol, 2008).

While poor quality relationships have been found to significantly increase the risk for a woman's chance of reincarceration, there is evidence that positive family ties are an important source of support both during incarceration and post release (Cleveland, Visher, & Courtney, 2006; Leverentz, 2006). Cleveland et al., (2006) found that 78% of former offenders received some sort of support from family members and 80% lived with a relative upon release. Bales and Mears (2008) pointed out that it remains unclear whether these supportive family ties existed prior to incarceration or emerged or were strengthened during incarceration. For Hispanic drug and alcohol addicted offenders of both genders, family support was found to be key to preventing drug abuse post-release, although this effect was not clearly demonstrated with both White or Black offenders (Messina et al., 2006). Finally, while Sampson and Laub (1993) described what they termed "the Good Marriage Effect" among male ex-offenders who desisted from criminal behavior due to the informal social control of a committed relationship, this effect was not clear with female offenders. Giordano, Cernkovich, and Rudolph (2002) observed

that marriage and having children do not deter criminal behavior but that once basic resources are available to women who are released from prison, these pro-social roles may become part of a new and valuable noncriminal role.

Jobs and Education

Job satisfaction and attaining an education are associated with longer periods out of prison for adult males (Benda, 2005; Giordano et al., 2002). For female offenders, time out of prison are lengthened by both the number of children she has and the quality of her relationships (Benda, 2005; Giordano et al., 2002). For a female offender, having more than one child and having a strong relationship with family members, as opposed to with a significant male partner, were found to be correlated with a longer time out of prison before recidivating (Benda, 2005; Giordano et al, 2002).

Changing Self-Concept

There is considerable debate regarding the role of self-concept in recidivism and desistance in general, and further debate over whether this differs between males and females. As previously discussed, marriage has been linked to desistance and reduced recidivism in males and prosocial relationships linked to reduced recidivism in both genders (Laub et al., 1998). It is unknown whether the reduction in criminal activity is due to the institution marriage itself, or the willingness to be married indicating an underlying maturational process (Laub et al., 1998). Some assert that it is the control of a pro-social mate or simply the lack of time to spend with one's friends that are responsible for the reduction in criminal behavior, while other researchers believe that these roles

may produce a change in self-concept (Giordano et al., 2003; Sampson & Laub, 2003). Among both males and females these new prosocial identities such as "parent," "worker," "student," or "partner" are thought to become more valuable than the behaviors associated with the previous, criminal identity. These roles become incompatible with the new identities and too valuable to risk losing by returning to criminal behavior (Giordano et al., 2002; Rumgay, 2004).

Definition of Recidivism

The actual definition of recidivism affects how the rates of recidivism are reported. While recidivism is commonly agreed upon as a return to criminal behavior after release from prison or after completion of a rehabilitative program, discussion of the topic is made problematic as several operational definitions exist for the concept (Jancic, 1998). In some cases, recidivism is defined as rearrest, while in other cases, it includes reconviction or reincarceration, and in yet others, absconsion is included.

Maltz ([1984] 2001) reported that there also exist a number of timelines used in the definition as well. Some researchers considered recidivism to have occurred at the time of the commission of a new crime while others viewed it as occurring at the time of reconviction (Beck, 2001; Maltz ([1984] 2001). This could result in longer or shorter periods between reoffense and reconviction depending on whether the individual accepted a plea bargain or a lengthy trial, thus affecting the data reported. In situations in which it is more common for individuals to accept plea bargains, it may appear that those individuals stayed out of prison a shorter time than those who were in custody and

awaiting trial when, in fact, they may have been released at the same time. Spivak and Sharp (2008) found that a Department of Justice used four different measures that included new arrest, conviction for a new offense not related to previous offenses, resentencing to prison after violation of parole on the original charges and resentencing to prison on a new sentence.

Both Spivak and Sharp (2008) and Maltz (1984 [2001]) argued that defining recidivism only as a return to prison may ignore other factors that are equally important as indicators of recidivism. These included factors such as an individual holding a job for a period of time after release, maintaining family relations, maintaining desistance from drug or alcohol use, commission of a less serious crime than before, commission of a nonviolent versus a violent crime or staying out of prison for a longer period of time than before (Spivak & Sharp, 2008; Maltz (1984 [2001]). Along these same lines, in a 2005 study, Walters reached a different conclusion (Walters, 2005). Walters (2005) hypothesized a difference between a dichotomized (yes/no) measure of recidivism as compared continuous measure (number of subsequent arrests). While Walters (2005) believed there was an advantage in comparison of numbers of arrests as an important indicator of behavioral change, his study failed to produce significant differences when comparing the correlation between scores on the Psychological Inventory of Criminal Thinking Styles (PICTS) and recidivism as a dichotomized measure or a continuous measure.

Aging Out of Crime

Compared to any other reason for desistance, more people appear simply age people age out of crime. Gottfredson and Hirschi (1990) first pointed this out in the mid 1980's and subsequent research has supported this (Massoglia & Uggen, 2007). This has been termed the "age-curve constant." It has been found to be remarkably stable, even for those offenders with high rates of offenses and for persistent offenders. It is one of the factors that have been clearly linked to staying out of prison, regardless of other interventions. Due to its relationship to recidivism rates, it will be controlled for in this study.

Race of Offender

Until very recently, Blacks of both genders have incarcerated at a higher rate than other races. While this 25-year trend has been reversed due, at least in part due to new cocaine sentencing laws, proportionately more Blacks are incarcerated than any other race (Marks, 2009). This reversed trend has yet to reach Black women, however, who are still incarcerated at seven times the rate of white women and are the fastest growing segment of the prison population (Belle & Ducet, 2007). For this reason, race will be controlled for in this study as it, alone, may predict the likelihood of entrance or return to prison.

Length of Study/Observation Period

The length of the period of study influences the reported recidivism rate. Walters (2005) referred to this in his discussion of the limitations of his 2005 study using the

PICTS as a predictor of recidivism in female offenders. Walters (2005) conceded that some of the "good outcome" or nonrecidivating subjects would likely have been reclassified as "poor outcome" or recidivating subjects had the study been extended six months. Maltz (1984 [2001]) discussed this at length and criticized the most commonly used one year post release recidivism for the same reasons citing at least one example in which the statistically significant difference between recidivators and nonrecidivators at one year post release, disappeared by two years post release.

In sum, there is much discussion and disagreement between the various disciplines that study criminal behavior as to the exact etiology of the behavior and associated risk factors. Three factors, race and age, have been clearly linked to recidivism in that Black women are overrepresented in the prison system and crime rates and level of seriousness decrease as an individual ages. Due to the consistency of these findings, they will be controlled for in this study.

Finally, the findings of gender-related effects on recidivism challenge the long-held assumption that male and females are affected by the same factors and equally by any factors that they share. This also raises the question of the validity of the tools currently used in corrections to measure risk factors for areas of concern such as recidivism when gendered differences are not taken into account. This question is at the basis of this study.

The High Social Cost of Recidivism

As discussed previously in this chapter, the monetary costs associated with incarceration are considerable, whether in regards to a first-time incarceration or reincarceration. There are other equally high social costs as well. According to a Department of Health and Human Services report released in 2006, two million children in the United States had an incarcerated parent. In 2008, a report released by the Annie E. Casey Foundation (AECF) indicated that 2% of all minor children in the United States had one incarcerated parent (as cited in Evanson, 2008). Most of these children were under the age of eight, 22% were under the age of 5 (Evanson, 2008). Although the information in the report disputed the widespread assertion that the parents of incarcerated parents were more likely to go to prison themselves, it did confirm that social and school problems as well as economic hardship were more likely for these children (Evanson, 2008). Foster care placement was more frequent and for longer duration than for those of nonincarcerated parents (Evanson, 2008).

Kennedy (2006) cited different statistics, suggesting that these children were seven times more likely to end up in prison themselves. Kennedy (2006) added that one study found that as many as one in 10 would be incarcerated before reaching adulthood. Kennedy (2006) also stated that of the approximately 100,000 juveniles incarcerated at the time, many would become recidivists because of the lack of effective reentry programs.

Although the statistics differ, the social costs of recidivism reach far beyond a female inmate and into the family and community structure. Brown (2003) pointed out that men and women show important psychosocial differences. Brown (2003) noted that they perceived the world differently, experienced situations differently and reacted differently from men, even in what appear to be similar situations. As a result, Brown (2003) emphasized that men and women "do time" differently from one another. While male offenders tended to focus on "doing their own time" and by relying on their own inner mental and physical abilities to see them through their prison experience, family ties remained very strong for incarcerated women (Brown, 2003). Their incarceration reached beyond their personal experience and into their family networks, as they often work to remain connected to the lives of family members, their own mothers and their children in particular.

Prior to incarceration, more that 60% of female offenders reported having custody of their children and 52% were their children's primary financial support (Mumola, 2004). While incarcerated, the support and care of these children most often falls on the maternal grandmother with foster care placement as a second option (Brown, 2003).

Risk Assessment and Actuarial Tools in the Correctional Setting

Assessing the risk of offenders' institutional adjustment and the likelihood of return to prison, or recidivism, are an integral part of the criminal justice system (Champion, 1994). The data from these assessments drives decisions surrounding various types and levels of risk, recidivism included. In the absence of a unifying theory

to determine risk and inform decision making, practitioners in the field of corrections have developed actuarial tools to predict the odds of certain behaviors among groups of offenders. A brief history of some of these instruments follows as well as a discussion of the utility and limitations of each. Discussion of the Personality Assessment Inventory (PAI) and its validity when used with female offenders concludes this section.

Types of Risk Assessment

Risk prediction, according to Lindsey and Beail (2004), falls into two broad categories. These include static risk assessment, which is based upon unchanging (static), historical and actuarial factors and dynamic risk assessment, which is based upon changeable, immediate and proximal variables. Lindsey and Beail (2004) described static risk assessment as considering unchanging characteristics of the individual such as demographics and criminal history. In most cases, risk based on static factors can only increase. For example, if an individual committed another crime, it would add to their history of criminal behavior, thus raising their risk level. The only factor that can reduce static risk is aging, which has been shown to be correlated with less criminal behavior (Lindsey & Beail, 2004). On the other hand, assessment based on dynamic variables considers factors such as mental health conditions or alcoholism, that can change with treatment or acute factors such as being intoxicated or deterioration in functioning.

History of Risk Assessment

Prior to the development of actuarial measures, the courts and correctional facilities often relied upon the clinical judgment of mental health professionals, nearly

always psychiatrists and later, psychologists, to make predictions about offender's future behavior. Unfortunately, the accuracy of these predictions was questionable (Norko & Baranoski, 2005). The need for an alternative to clinical judgment was illustrated clearly by a review of the literature conducted by Monahan (1981). Monahan (1981) found that mental health professionals had only a 33% accuracy rate when predicting dangerousness in clients. Actuarial tools represented an improvement to this poor rate with standardized, objective measures based on current research. These were aimed more at assessing risk factors that increased the likelihood for certain behaviors, such as violence, rather than providing information about the individual Monahan, 1981). Early versions of these tools, however, focused on assessing or appraising current or future dangerousness or violence when factors contributing to these were relatively unknown Monahan (1981). As a result, early risk appraisal tools, although somewhat better than clinical judgment alone, showed predictive validity rates that were no better than chance (Norko & Baranoski, 2005; Monahan, 1981).

Uses of Actuarial Tools in Risk Assessment

Brennan (2007) described the purpose of assessment in correctional settings as spanning from the determination of risk--both inside the prison and upon release--to case conceptualization and treatment planning. The Level of Service Inventory (LSI), the Violence Risk Appraisal Guide ([VRAG] Quinsey, Harris, Rice, & Cormier, 1998) and the Hare Psychopathology Checklist-Revised ([PCL-R] Hare, 1991) are examples of widely-used risk assessments that rely on static, or historical data and demographics of

the individuals and known similar groups. Clinical assessment involves such tests as the Minnesota Multiphasic Personality Inventory series ([MMPI] Butcher, Dahlstron, Graham, Tellegen, & Kaemmer, 2007), and the PAI (Morey, 1991).

Limits of Actuarial Tools

Many of these instruments underwent several changes since their inception, most notably moving from predicting dangerousness to assessing risk factors for various outcomes (Monahan, 1981). These tools were further developed and researched and, sixteen year later, Monahan's findings were more optimistic. Monahan's 1997 review reported an improved rate of prediction with these tools to be better than chance (Monahan as cited in Norko & Baranoski, 2005). Recent research by Norko and Baranoski (2005) and Brennan (2007) lent further support for actuarial risk assessment tools as outperforming clinical judgment or chance alone. These improvements in accuracy, however, do not address some important shortcomings of an actuarial approach to risk assessment that will be discussed later in this chapter.

The predictive rates of actuarial tools have improved, but their construction remains the same, based upon factors linked to likelihood of future violence or criminal behavior as identified in current criminological research (Brennan, 2007; Quinsey et al., 1998). Monahan (1981) distinguished between *actuarial* and *clinical* approaches based on consideration of either these static factors or dynamic factors. Static factors are commonly used in actuarial approaches and chiefly involve reviewing records on an offender. Dynamic or changing factors are typically utilized in clinical approaches and

measured by professional assessment practices such as personality tests (Monahan). At times, these areas overlap. Logan (2009) suggested that it makes sense to consider both static and dynamic factors when assessing for violence risk to give a more complete picture of the individual.

In the early days of risk assessment development, some factors, such as mental illness, were overemphasized risk factors for future violence and recidivism. To resolve this, the factors considered in risk assessments have changed considerably during the past two decades as risk assessment research has progressed (Norko & Baronoski, 2005). As more data was gathered, other factors were found to carry more weight in prediction of future violence. Examples of these weighted factors are substance abuse and socioeconomic factors such as gender (male), age (18 to 24) and low socioeconomic status (Norko & Baronoski, 2005). One of the strongest predictors of risk of future violence was found to be a history of past violence. Lidz, Mulvey, and Gardner (1993), found that in a university emergency psychiatric setting staff could predict which patients were likely to become violent with about 60% accuracy based on a history of violence and other factors. So salient was previous violence as predictor of future violence that if that factor alone violence alone had been considered, sensitivity would have increased to 69% (Lidz et al., 1993). However, it would have resulted in over identification of those who did not become violent but were identified as high risk. It is of note that the predictive validity in the Lidz et al. (1993) study was gender dependent; females were significantly underestimated by clinicians and the results of this study did not yield the

same sensitivity as with males.

Gender Bias in Actuarial Tools

Although gender responsive approaches in women's prisons began to gain prominence the 1990s, the system has been influenced by an equally strong drive within the correctional system at large to rely on actuarial techniques to direct programming (Maurutto & Hannah-Moffat, 2006). When women's needs are targeted in this way, tensions and contradictions result from this intersect of opposite approaches; one is geared towards a more individualized approach while another is geared towards reduction of the individual to a set of numbers or risk factors (Maurutto & Hannah-Moffat, 2006). Problems such as overclassification can result, placing women at the same custody level as men for committing the same crime, even though research has found little connection between the type of crime a woman commits and her institutional conduct (Bloom et al., 2003).

As previously discussed, many of the problems are inherent in the classification systems that are used in the penitentiary system. Brennen (2007) observed that it has become clear that the assumption that risk assessment tools are generally gender neutral is a mistaken one. Maurutto and Hannah-Moffat (2006) noted that most classification schemes, although validated for women, rely on male normative standards. The resulting evaluations lose sight of the woman in terms of the many other factors that affect her gender differently from men, such as socio-economic status and attainment (Maurutto & Hannah-Moffat, 2006).

Many of these instruments were developed for use with male offenders, and much of the subsequent research on them was based on male offenders. The question of generalizability and applicability of the results to females has largely remained unexplored until recently (Brennan, 2007; Salekin et al., 1998; Skopp et al., 2007). Males and females do not have identical risk factors for beginning and returning to criminal behavior (Bloom et al., 2003; Brennan, 2007; Messina et al. , 2006; Salekin et al. , 1998; Skopp et al., 2007). There remains controversy in the field regarding how to approach resolving this: adjusting current assessment instruments to be more gender neutral or include more gender sensitive items in them (Brennan, 2007).

Brennan (2007) did not endorse either approach to resolving these shortcomings,but did discuss the limitations of the current instruments in assessing women offenders. Citing research by Belnap and Holzinger (2006) and Blanchette and Brown (2006) , Brennan (2007) asserted that the current gender neutral instruments offer only modest predictive validity for female offenders.

Belnap (2007) described the limitations of actuarial instruments as being over simplified and offering almost no information from which treatment may be developed. Static factors, such as previous criminal history and socioeconomic factors are a large component of actuarial measures and the links between these factors and criminal behavior is not always clear (Belnap, 2007). Link, Andrews, and Cullen (1992) found that the rates of violence among mentally ill patients, for example, could not be explained by demographics alone when compared to other nonviolent groups. On the other hand,

Swanson, Holzer, Gangu, and Jono (1990) found that the highest rate of violence was among males ages 18 to 24 in the lowest socioeconomic group.

Brennan (2007) also pointed out that actuarial instrument do not allow for changes in individuals that have been well documented as reducing crime, such as aging, completing treatment programs, changes in living environments, attaining an education or job skills. Nor do they account for the overrepresentation of minority groups in prison (Brennan, 2007). Although they are expedient, Brennen (2007) described them as reducing an individual down to a single number and omitting individual factors such as those linked to gender. As a result, they offer little upon which to build treatment plans or to plan interventions.

Finally, while it has been supported that actuarial models outperform clinical judgment only, Brennan (2007) asserted that these instruments rely on simple linear models and leave much to be desired when used for treatment planning and intervention. They are often used at the point of intake with offenders and determine initial placement or provide an initial, label that may be difficult to change later on (Brennan, 2007; Bowker & Starr, 1999). In many cases, however, they continue to be used throughout incarceration to determine housing and treatment needs (Bowker & Starr, 1999).

Personality Assessments in Corrections

Norko and Baronoski (2005) reported that research into one factor that contributes to recidivism, violent behavior, has concentrated on socio demographic and environmental variables. These factors, along with substance abuse, have been

identified as significant predictors of violence but the data on other factors, such as mental health variables, have been difficult to link to violence and recidivism (Norko and Baronoski, 2005). This limited focus is described as a weakness by Norko and Baronoski (2005) who commented that this type of assessment cannot consider response to treatment or other protective factors that may reduce the effects of preexisting factors.

Personality assessments are widely used and accepted in clinical settings. Research over the past three decades has indicated that they are valuable in forensic and correctional applications possibly as an alternative to the gender neutral instruments currently in use (Archer, 2006). Norko and Baranoski (2005) pointed to personality assessment tools as offering an advantage in that they consider both static and dynamic factors and have been found to increment the validity of static instruments such as the PCL-R (Walters, Duncan, & Geyer, 2003).

The Personality Assessment Inventory

The Personality Assessment Inventory (PAI) is one such instrument that has received attention over the past two decades. Several studies have shown the PAI to be a promising instrument in predicting institutional adjustment, recidivism and in incrementing the accuracy of other instruments. Walters et al. (2003) found this to be the case when using both the PCL-R and the PAI in predicting the institutional adjustment in both male and female federal penitentiary inmates. Walters and Duncan (2005) found the same results when predicting the post-release outcome in federal penitentiary inmates. Buffington-Vollum et al. (2003) and Caperton, Edens, and Johnson (2004) found that

the PCL-R and the PAI identified similarities and differences in factors predicting institutional misconduct in both male and female inmates in state penitentiaries and female inmates in jails.

As with other areas of correctional research, the majority of studies on the PAI have been with male inmates, leading researchers Skopp et al., (2007) to remark that "more research along these lines clearly would be useful" (p 115), regarding the applicability of the findings to females. Skopp et al. (2007) further remarked that more research is needed in the value of the PAI in community outcomes, such as recidivism as this remained an understudied area of research on both male and female offenders.

Theoretical Framework and Development

The PAI is a 344-item self-administered inventory of adult psychopathology (Morey, 2007). It consists of 22 nonoverlapping full scales covering the constructs most relevant to several mental disorders (Morey, 2007). These scales include four validity scales, eleven clinical scales, five treatment scales, and two interpersonal scales (Morey, 2007).

The PAI was developed in 1991 by Leslie Morey as an alternative to commonly-used personality measures, chiefly the Minnesota Multiphasic Personality Inventory (MMPI). Morey developed the PAI to address possible limitations of other instruments: a high reading level, overlapping scales, little value for treatment planning and an unwieldy number of test questions.

Table 2.0 The Scales and Subscales of the Personality Assessment Inventory

Scale	Acronym	Number of Items	Area(s) Assessed
Validity Scale			
Inconsistency	INC	10 pairs	Consistent answering throughout test on pairs of highly-correlated items
Infrequency	INF	8	Random or careless answering
Negative Impression	NIM	9	Suggests an attempt to exaggerate symptoms or to present an unfavorable impression
Positive Impression	PIM	9	Attempt to present overly favorable impression, reticence to admit to minor flaws
Clinical Scales			
Somatic Complaints	SOM	24	Preoccupation with physical complaints commonly associated with somatization
Anxiety	ANX	24	Observable and self-reported symptoms of anxiety across different modalities
Anxiety-Related Disorders	ARD	24	Symptoms and behaviors related to anxiety disorders such as PTSD and phobias
Depression	DEP	24	Symptoms and feelings of depression
Mania	MAN	24	Mood-related, cognitive and behavioral symptoms of mania and hypomania
Paranoia	PAR	24	Both transient symptoms of paranoia and more stable symptoms of paranoid personality

Schizophrenia	SCZ	24	Symptoms relevant to a spectrum of schizophrenic disorders
Borderline Features	BOR	24	Attributes commonly associated with this disorder: impulsivity, emotional lability, anger
Antisocial Features	ANT	24	History of illegal acts, difficulties with authority, egocentricity, excitement-seeking
Alcohol Problems	ALC	12	Alcohol use and dependence and associated problems and consequences
Drug Problems	DRG	12	Drug use/dependence/ and problems and consequences from use
Treatment Scales			
Aggression	AGG	18	Characteristics and attitudes surrounding anger, hostility, aggression
Suicidal Ideation	SUI	12	Focuses on the full range of suicidality from ideation to thoughts and plans for suicide
Stress	STR	8	Measures the impact of recent stress in major living activities
Nonsupport	NON	8	The perception of social support and the quality and type of that support
Treatment Rejection	RXR	8	Readiness to change, amenability to treatment
Interpersonal scales			
Dominance	DOM	12	Levels of control or submission, independence or dependence in a relationship
Warmth	WRM	12	Level of interest of support and empathy in a relationship; warmth or cold and rejecting

Note. Adapted from "The Personality Assessment Inventory Professional Manual, 2nd Ed." by Leslie Morey.(2007). Lutz, FL: Psychological Assessment Resources

The PAI is not based on a particular overarching theory of classification, but instead, on clinical and empirical constructs of psychopathology (Morey, 2007);Cox, Thorpe, & Dawson, 2004). Included in these constructs are items such as general distress, acting out, egocentricity and exploitation, and social detachment (Morey, 2007; Cox et al. 2004).

The PAI consists of 344 questions and is written at an approximately 4th grade reading level (Morey, 2007). Test responders answer questions on a 4-point scale including: F=False, Not At All True, ST=Slightly True, MT=Mainly True, and VT=Very True (Morey, 2007). These scores translate into twenty-two non-overlapping scales which include 4 validity scales, 11 clinical scales, 5 treatment scales, and 2 interpersonal scales (Morey, 2007). Results are reported in T scores with a range of 20 to 110 for the INC, IFR, NIM, PIM, SOM, ANS, ARD, DEP, MAN, PAR, SCZ, BOR, ANT, ALC, DRG, AGG, SUI, STR, NON, RXR, DOM AND WRM scales on side A of the profile sheet and 30 to 110 for the SOM, ANX, ARD, DEP, MAN, PAR, SCHZ, BOR, and AGG scales on side B of the profile form (Morey, 2007; Cox et al. 2004). Mean scores range between 50 and 70 for all scales, with scores above 70 or below 50 falling in the significant range (Morey, 2007; Cox et al. 2004). Ten of the clinical scales are divided into 31 subscales. These scales assess somatic complaints, anxiety, anxiety-related disorders, depression, mania, paranoia, schizophrenia, borderline features, antisocial features, alcohol-related problems, and drug-related problems (Morey, 1991). The subscales were chosen based on their long-term stability within the classification of

psychopathology and their diagnostic relevance in contemporary practice (Douglas et al., 2001; Maruish, 1999; Morey 2007; Morey, 2003;). Morey (2007) pointed out that of the several hundred possible syndromes that could have been included in the PAI, only those that have retained significance in the field of clinical practice were included.

A multidisciplinary research team consisting of psychologists, students, psychiatrists, and other mental health practitioners generated more than 2,200 items and through a number of procedures, refined the final set to 344 (Morey, 2007). Only those questions that reflected the multidimensional nature of the constructs and showed content validity were chosen (Morey, 2007). These questions were not taken from the same pool of questions from which earlier personality tests were developed as Morey believed that there were difficulties shared by that pool of items and he did not wish to build those into this tool (Morey, 2007).

Initially a 597-question beta version of the PAI was administered to three samples of subjects (Morey, 2007). The normative sample consisted of 229 adults, chosen with characteristics balanced to match the demographics from 1997 U.S. Census statistics (Morey, 2007).. A second sample, the clinical group, was also administered the test (Morey, 2007). This group consisted of 96 patients from both inpatient and outpatient treatment settings (Morey, 2007). A third group, the instruction set manipulation sample, consisted of 89 undergraduate students (Morey, 2007). This last group was instructed to answer questions to either present an overly negative or positive impression (Morey, 2007). The final 344-item set was chosen to create non overlapping scales and subscales.

Any question that showed gender, age, race or ethnic bias was eliminated (Morey, 2007). The alpha coefficients for the clinical, treatment and interpersonal scales ranged from .80 to .93 (Morey, 2007).

The PAI is one of only two self-report inventories that do not utilize "true/false" answers. Instead, it utilizes a four-point Likert scale that includes "not at all true", "slightly true", "mainly true," and "very true" (Weiner & Green, 2007). Each scale consists of an average of eight items.

The PAI Scales

The PAI consists of four sets of scales. These include Validity Scales, which give a general measure of the truthfulness with which the individual answered, the Clinical Scales, used to identify symptoms associated with mental illness, the Treatment Consideration Scales, used to identify factors that present potential challenges to treatment and the Interpersonal Scales that assess the interpersonal style of the respondent (Morey, 2003). In addition, several supplemental scales have been developed since the introduction of the PAI. These are not utilized in this study, but some are discussed in terms of forensic research. The Validity and Treatment Consideration scales are discussed in more depth due to their salience to this study.

Validity Scales

One of the first considerations in any assessment is the validity of the profile. In the correctional or forensic setting, test results may have high stakes attached to the results, making the need for accuracy even higher (Resnick & Zuchowski, 2007). Even

so, research remains mixed on levels of malingering in forensic versus general populations and there remains a noted absence of data on malingering in general population (Rogers, 2008). Various rates of malingering have been found in correctional and forensic populations, and appear to depend upon the definition used. For example, Rogers et al. (1998) found a 15.7% rate of malingering reported by 221 forensic experts, while Rogers et al., (1994) found 17.4% in a similar study. Mittenberg, Paton, Canyock, and Condit (2002) queried neurologists about the percentage of patients they believed fell on the continuum of mildly exaggerated symptoms to suspected malingering. With this broadened definition, the percentage increased to 30% (Mittenberg et al., 2002).

Overall, research has supported the effectiveness of self-report inventories, including the PAI, in predicting outcomes in both forensic and correctional areas (Rogers, 2008; Walters et al., 2003). The presence of built-in validity scales in the instruments themselves offers a measure of the degree to which the results are accurate.

Archer (2006) remarked that development of validity scales is among the most difficult challenge in the assessment of psychological facets and constructs. In addition to the four original scales, groups of responses have been developed by researchers to represent other important aspects of test validity (Archer, 2006). Archer (2006) asserts that none of these have been adequately validated on correctional populations. Following is a discussion of the original scales and two supplemental scales that have been researched with forensic populations. Actual validity, predictive and sensitivity levels will be discussed in more detail in chapter 3.

Inconsistency scale (ICN). This scale consists of 10 pairs of highly-correlated items designed to indicate whether or not an individual answered consistently throughout the instrument (Morey, 2007).

Infrequency (INF). This eight-question scale indicates if an individual has responded carelessly or randomly (Morey, 2007). The items do not correspond to psychopathology and have either a very high or very low endorsement rate (Morey, 2007).. They were designed in such a way that most individuals would respond in the same direction on some pairs and in opposite directions in others (Morey, 2007). An example of this type of question might include the question pair: "I read everything I get in the mail" and "I sometimes throw away mail without reading it", with both questions answered "T" or both answered "F."

Negative impression (NIM). The nine-question NIM was developed to detect malingered and overstated or exaggerated symptoms or problems (Morey, 1991). An example of a type of question included in this scale might be: "I have six different personalities inside of me."

Initially developed on a sample of college students who were coached in symptomology as compared to naïve clinical and normal samples, the NIM showed promise in differentiating between the two groups. Subsequent research has shown mixed results, with one study differentiating between actual and feigned depression, while another differentiated between actual and feigned schizophrenia (Edens, Cruise, & Buffington-Vollum, 2001). Edens et al., (2001) reported that only one group study has

been conducted in the forensic study that investigated the NIM index. Data from Rogers, Sewell et al., (1998) and archival data from Rogers et al., (1998) were combined and found to differentiate between feigned and non feigned profiles.

Positive impression (PIM). This nine-question scale measures the responder's tendency to portray him or herself in an overly favorable light. It is sometimes described as "faking good" or socially desirable responding (Morey, 2007). An example of a question on this scale might be: "I sometimes complain about my life too much to others." Although this might be construed as self or other deception in some instances, Morey (2007) noted that responding in a socially desirable way may also be a personality trait that indicates openness to experience and good social adjustment.

Malingering index (MAL). The Malingering Index is a supplemental validity index that was developed on features commonly found in simulated "fake-bad" profiles (Edens et al., 2001). It is noteworthy in that excellent classification accuracy was found in a study conducted by Morey and Lanier (1998). In other studies, mixed results have been found in differentiating real and faked PTSD, and misidentifying alcoholics (Calhoun et al. , 2000); Liljequist, Kinder, & Schinka, 1998). Liljequistet al (1998) found that the MAL scale correctly classified 45% of faked PTSD simulators. In forensic settings, the MAL was found to correlate with the SIRS-Symptom Combinations, Improbable and Absurd Symptoms scales. Rogers, Sewell, et al. (1998) found that a cut score of greater than or equal to five could be used in both correctional and clinical

settings to indicate feigning. However, Edens (2001) noted that in reality, this may not be very useful, as few of the feigners scored at that level.

The Rogers discriminant function (RDF). The RDF was developed based on a weighted combination of twenty indicators, and has been found to further identify invalid profiles and malingering in clinical and general populations with a cross-validated sensitivity of more than 80% (Morey & Hopwood, 2006; Morey & Lanier, 1998; Rogers et al., 1996). It, too, has been researched in forensic settings, but with problematic results. Wang et al. (1997) found no association between the SIRS and the RDF in a small correctional sample, although a significant correlation was found between the two instruments in the clinical scales. Roger et al., (1996) found that the Rogers Discriminant Function was useful in screening for, but not identifying, malingerers in a correctional setting and further recommended it be used for screening purposes only with that population.

Clinical Scales

As previously discussed, the PAI clinical scales were developed to measure clinical syndromes that were selected based on their importance in classification of psychopathology as well as their significance in clinical practice (Morey, 2007). For example, while neurasthenia is of historical importance, it is no longer included in diagnostic manuals and has little clinical importance and was not included in the PAI. Depression, on the other hand, has both historical and clinical importance and was included as one of the disorders assessed by the PAI.

As this research project involves investigation into the Treatment Consideration scales and the Validity scales to a lesser degree, it is beyond the scope of this paper to discuss each Clinical scale in depth. However, a general understanding of the scales is helpful to provide a broad picture of the entire instrument. Following is a brief description of each clinical scale and the area assessed by that scale.

Somatic complaints (SOM). This 24-question scale measures the group of syndromes classified by the DSM as "Somatoform Disorders." A question on this scale might include: "I lose feeling in parts of my body for no reason". It consists of three subscales. These include the SOM-C, which measures dramatic conversion types of symptoms, SOM-S which measures more common physical complaints such as headaches and backaches, and SOM-H, which measures preoccupations with health and physical concerns (Morey, 2007).

Anxiety-related disorders (ARD). Morey (2007) noted that anxiety is present in most clinical disorders and an anxiety scale as such, is not particularly useful in identifying specific disorders. This scale consists of 24 questions and is organized into three subscales. These subscales measure anxiety as related to three anxiety disorders. An example of questions included in this scale might include: ""I can't seem to let go of bad memories for a long time". These include the ARD-O scale that measures Obsessive-Compulsive symptoms such as fear of contamination, the ARD-P scale that measures Phobic symptoms such as fear of heights or enclosed spaces and the ARD-T/Traumatic

Stress scale that measures reactions to stress such as nightmares, or anxiety reactions (Morey, 2007).

Depression (DEP). The 24-question DEP scale was designed to balance the weighting among the full range of depressive symptoms. This scale would include questions similar to "Everything I do seems to take a great deal of effort".

The subscales include DEP-C (Cognitive) as a measure of, among other symptoms, negative expectancies and helplessness, DEP-P (Physiological) as a measure symptoms such as sleep disturbances and loss of sexual drive and DEP-A (Affective) as a measure unhappiness and apathy common in the depressed population (Morey, 2007).

Mania (MAN). This 24-question scale was designed to measure the most common symptoms of mania. It should be noted that the scale is not sensitive to psychotic symptomology as Morey (2007) found such measures of limited usefulness in differential diagnosis between mania and other psychotic disorders. Questions included in this subscale might include "It bothers me when others interfere in my plans to do something great". The three subscales in this scale include MAN-A (Activity), which measures such symptoms as increased motor activity and lack of sleep, MAN-G (Grandiosity) which measures inflated self-esteem and overconfidence and MAN- I (Irritability), which measures increased impatience and demandingness (Morey, 2007).

Paranoia (PAR). The assessment of paranoia presents a challenge to the diagnostician due to the particular characteristics of the paranoid individual such as suspiciousness and feelings of persecution. Due to this, Morey (2007) chose to

concentrate on the phenomenology of the disorder rather than the symptomology. Questions in this subscale might include "It seems many people are out to get me" as a positive response and "I seem to have as many good things happen to me as other people" as a false response.

The Paranoia scale consists of 24 questions organized into three subscales. The PAR-P (Persecution) subscale measures delusional beliefs that are typical of the disorder. The PAR-H (Hypervigilance) subscale measures the attitude of wariness and over-preparedness. The PAR-R (Resentment) subscale measures the bitter or envious feelings the individual may experience, as well as the sense of being treated unfairly by others (Morey, 2007).

Schizophrenia (SCZ). This 24-question scale measures the three most common aspects of schizophrenia: positive symptoms, negative symptoms and thought disorders. It consists of three subscales and an example of the questions included in this scale might include "I don't seem to get along with people as well as others".

The SCZ-P (Psychotic Symptoms) subscale measures positive symptoms such as delusions and hallucinations. The SCZ-S (Social Detachment) subscale measures one of the most common negative symptoms of schizophrenia, namely social withdrawal and detachment from others. The final scale, SCZ-T (Thought Disorder), measures such symptoms as thought blocking and poor concentration (Morey, 2007).

Borderline features (BOR). Although Morey (2007) described the concept of the Borderline Personality Disorder as controversial, he also emphasized that it is one of the

most prevalent. After an extensive review of empirical studies, four of the most commonly references aspects of the syndrome were included in the subscales of this 24-question scale. Questions might include "I'm never sure who I am".

Subscales include BOR-I (Identity) which measures uncertainty about the identity of self and significant others, BOR-A (Affective Instability) which includes feelings of being overwhelmed by intense and poorly controlled emotions such as anger, BOR-N (Negative Relationships) that measures both the profound dependency on others combined with the expectation of abandonment and BOR-S (Self-Harm), which measures the tendency to engage in self-destructive behaviors such as cutting (Morey, 2007).

Alcohol problems (ALC) and drug problems (DRG). These two scales consist of 12 questions each and directly inquire about drug and alcohol usage and the consequences resulting from their use. Morey (2007) noted that while some researchers have questioned the validity of such direct inquiries, adequate support for this type of assessment has been found in more studies. Questions might include "I can't control my drinking".

The Treatment consideration scales

One of the unique features of the PAI is the set of scales designed to assess an individual's amenability to treatment and interventions and to identify complications that may not be apparent from the other PAI scales (Morey, 2007). The Treatment Consideration scales include five subscales. Two of these subscales identify potential for

harm to self and others, two measure the individual's environment and circumstances and one measures the individual's motivation for treatment (Morey, 2007).

As with the other PAI scales, the validity measures for the Treatment Consideration scales were based on comparison to mean scores on other similar measures of relevant groups and the correlations to clinical markers for these attributes. Descriptions of the individual subtests follow.

Aggression (AGG). The DSM diagnostic system has been criticized for not providing any classification of problems related to anger and aggression or their management (Morey, 2007). Questions included in this scale might include "I frequently get into fights with others".

Morey (2007) pointed out that anger control issues are central to a variety of personality disorders including antisocial, borderline, and passive aggressive and other disorders such as intermittent explosive disorder. Morey reported that, as aggression and anger are found to be prominent in a number of diagnoses, scores on the Aggression subscales (AGG) have been found to be elevated in a number of diagnostic groups.

The 18-question AGG scale is the only Treatment Consideration scale that includes subscales. These three subscales measure aggressive attitude, verbal aggression and physical aggression. The aggressive attitude scale includes questions such as "People are afraid of me when I get angry" or "I've threatened to hurt other people at times". The criterion group for the development of these scales included individuals who had a history of assault or violence, patients with a significant and current risk of harm to

others, individuals who had been arrested for rape and an outpatient sample of individuals with a history of spousal abuse (Morey, 2007). While each subgroup of the criterion group showed differing profiles, research has confirmed that AGG elevations are present in individuals with a history of violence and to be predictive of aggressive behaviors.

To date, the aggression scales remain the most well-researched with incarcerated populations. Walters et al. (2003) investigated the ability of the PAI to measure institutional misconduct in federal penitentiary inmates of both genders. Walters et al. (2003) found the Aggression scale (AGG) to be robust measure of institutional misconduct, hence also a good measure of increased risk of recidivism since these two factors have been linked. Salekin et al. (1998) found that the same scale also identified psychopathy and predicted recidivism in female jail inmates. Caperton et al. (2004) reported significant differences on AGG between inmates with and without general infractions. Rau (2002) found that female county jail inmates who scored above 70T on the AGG scale had significantly more disciplinary infractions than those who did not.

The AGG scale was been cross-validated with a number of other measures of anger and aggression in both general and incarcerated populations. Among the strongest of correlations (.83) was found between the PAI AGG scales and the NEO-Personality Inventory ([NEO-PI] Costa & McCrae, 1985) Hostility facet. This was followed by the correlation of .75 between the PAI AGG scales the Trait Anger Scale of the State-Trait Anger Expression Inventory ([STAXI] Spielberger, 1996).

The Suicide Ideation Scale (SUI). This 12-question scale measures suicidal ideations ranging from hopelessness to actual suicidal thoughts and plans (Morey, 2007). Questions might include "I would be better off dead".

This scale is significant in the correctional area as levels of depression and hopelessness about the future that an individual is feeling have been linked to recidivism, making this scale a promising measure of these risk factors (Hersen, Hilsenroth & Segal, 2004; Morey, 2003).

The SUI scale was developed form data from samples including a group of patients who were currently under suicide watch and a group of patients who had made suicide attempts within six months prior to completing the PAI (Morey, 2007). While all members of the sample group scored in excess of 70T, scores were more elevated with among those in the sample with more recent attempts. These differences in scores suggest that the SUI scale was sensitive to the immediacy of the ideations.

Studies of the SUI scales among correctional populations have supported discriminant validity of these scales. Wang et al. (1997) found elevated scores among a sample of male inmates who made subsequent suicide gestures as compared to a group of male inmates who had not received a suicide assessment during the observation period. Dunham (2000) found similar results.

These results take on further relevance when the link between suicide attempts, ideations and recidivism are examined. Suicide attempts were found to be the strongest predictor of violent recidivism in female inmates in one study, while another study found

that a history of self-injury correlated with recidivism (Blanchette, 1997). Apparently, suicide attempts may indicate a propensity to solve one's problems with violence towards both others and self. In addition, while depression, the emotion most commonly linked to suicide, has largely been discounted or ignored altogether as a contributor to criminal behavior in males, at least two large studies have found that this may not hold true for females (Obeidallah & Earls, 1999). Benda (2005) found that a history of depression, fearfulness and suicidality were associated with a women's return to prison. Briere (2000, as cited in Morey, 2007) found that the SUI scale reflected these depressive cognitions, particularly helplessness and hopelessness.

Stress (STR). This scale provides a general measure of the individual's perception of current stressors and coping skills. It consists of eight questions and reflects the perceived predictability, organization, structure, stressfulness and stability of the individual's surroundings (Morey, 2007). An example of a question included on this scale might be "I always worry about enough money to pay my bills".

Morey (2007) pointed out that, due to the objective nature of the STR and NON scales, few criterion group studies are available. Of the studies that have been conducted, a link was found between stressors that were serious enough to precipitate an adjustment reaction and elevations greater than 60T (Morey, 1991).

Correctional studies have supported both the validity of the STR scale as a measure of perceived current stressors as well as supported the link between stress and recidivism. Benda (2005) found that, in addition to depression and suicidality, a recent

history of stress was linked to a woman's return to prison. As this could also include the individual's perception of events, interventions to improve ways of handling stress have supported the assumption that stress is an important factor in recidivism. Hunter & Hughes (1993) found that a 12-week course in Stress and Anger Management produced a significant decrease in violent crimes among male releasees and lengthened time in the community prior to reconviction.

Nonsupport scale (NON). This eight-question scale provides a measure of the individual's perceived family and social support. An example of the questions included in this scale might include "My family is not a source of support to me".

The impact of both positive and negative relationships on female offenders is well-documented (Benda, 2005; Laub et al,, 1998; Leverentz, 2008). The female pathway to crime was found to be linked to a relationship with a criminogenic male (Benda, 2005; Smith, 2006). Wahl (1993) found that, although male and female inmates did not differ in ranking the importance of eight of the most commonly reported stressors associated with prison life, females described their severity differently. Among the most severe of stressors included the female inmates' separation from their children. Many of the incarcerated women in Wahl's (1993) study were single mothers and felt a particular loss when not allowed to see their children or participate in their lives. It is possible that the children provided support or that the lack of support from the institution was felt when visits were not allowed.

Treatment rejection scale (RXR). This eight-question scale measures the

attributes and attitudes surrounding motivation for making changes of a psychological nature. An example of a question included in this scale might include "I need to change the way I handle problems in my life".

As this scale measures the individual's amenability to such interventions as substance abuse treatment, it is of interest in the correctional setting. Extensive research in the literature suggest substance abuse and addiction are linked strongly to female recidivism. Messina et al. (2006) reported that the Treatment Rejection scale is a likely measure of recidivism potential. So frequently is it involved in criminal behavior that substance abuse treatment was listed as a critical need on a National Institute of Justice survey administered to jail administrators (Morash, Bynum, & Koons, 1998).

Interpersonal scales (DOM). This scale consists of 12 questions that ascertain the extent to which an individual is controlling and independent in personal relationships. Dominance is indicated at the high end of scores, submission at the low end. Questions might include "I like to make my own decisions".

Warmth (WRM). This 12-question scale assesses the level of empathy and support in relationships. A warm and outgoing style is indicated at the high end of the scale while a cold, rejecting style is at the low end. An example question might be "Most people tell me I am a warm person".

The PAI in Corrections

The application of this assessment tool to corrections for treatment as well as assessment for a variety of risks has shown much promise (Douglas et al., 2001; Morey,

1991). These applications will be discussed in more depth later in this section, but of particular interest is the applicability to female offenders. The five Treatment Consideration subscales are the focus of this study as they measure many of the previously discussed factors that have been linked in the literature to recidivism in female offenders, such as amenability to drug and alcohol treatment, family support, mental illness and hopefulness about the future.

PAI and Female Offenders

With the exception of a handful of studies including Walters et al. (2003) and Salekin et al. (1998) the bulk of the research on the PAI subscales has been conducted on male offenders. The Washington Correctional Center for Women (WCCW) routinely administers the PAI to newly incarcerated or re-incarcerated inmates. This study examines the treatment scales from those PAI results and associated recidivism rates.

As previously discussed in this chapter, actuarial measures offer an effective way to predict recidivism (Archer, 2006; Norko & Baronski, 2005). The limitation with actuarial measures, however, lies in their reliance on historical data and lack of sensitivity to changes in an individual that may provide increased resilience against risk factors such as drug and alcohol addiction, early asocial criminal peers, poverty, or untreated mental health issues (Blanchette, 1997; Obeidallah & Earls, 1999; Salekin et al.. 1998; Walters et al., 2003). Experiences such as drug and alcohol treatment, counseling, stress and anger management programs, domestic violence treatment, education and job training are examples of interventions that may lessen the effects of early risk factors. The Treatment

Consideration scales of the PAI are particularly well suited to study the effects of assuaging factors in female inmates in that these scales measure factors that have been linked uniquely to females (Blanchette, 1997; Obeidallah & Earls, 1999; Salekin et al., 1998; Walters et al., 2003). Following is further discussion of the individual Treatment Consideration scale subscales and the particular areas of concern with which they have a direct or strong indirect link.

The Treatment Consideration Scales as a Measure of Female Offender Recidivism

The AGG scales are among the most well-researched in the forensic setting of the PAI scales. Walters et al., (2003) found the aggression scale (AGG) to be robust measure of institutional misconduct in both genders in a federal penitentiary setting, and as this is linked to recidivism, also a good measure of increased risk of recidivism. Salekin, et al. (1998) found that the same scale both identified psychopathy and predicted recidivism in female jail inmates. Caperton et al. (2004) reported significant differences on AGG between inmates who had or had not accrued general infractions. In 2002, Rau found that female county jail inmates with scores above 70T on the AGG scale had significantly more disciplinary infractions than those who did not.

The AGG scale was also cross-validated with a number of other measures of anger and aggression in both general and incarcerated populations. One of the strongest correlations (.83) was found between the PAI AGG scales and the NEO-Personality Inventory ([NEO-PI] Costa & McCrae, 1985) Hostility subscale. A correlation of .75 was

also found between the PAI AGG scales and the Trait Anger Scale of the State-Trait Anger Expression Inventory ([STAXI] Spielberger, 1988).

As depression and hopelessness about the future have been linked to female recidivism, the SUI scale is significant in the correctional area, making this scale is a promising measure of these risk factors (Hersen, Hilsenroth & Segal, 2004; Morey, 2003). Dunham (2000) and Wang et al. (1997) found higher scores among a sample of male inmates who made subsequent suicide gestures as compared to a group of male inmates were not assessed for suicidality during the observation period. In one study, suicide attempts were found to be the strongest predictor of violent recidivism in female inmates, while another study found that a history of self-injury correlated highly with recidivism (Blanchette, 1997). Depression, the emotion commonly linked to suicide, has largely been discounted or ignored altogether contributing to criminal behavior in males. However, at least two large studies have found that it may be a contributing factor for females (Obeidallah & Earls, 1999). Briere (2000) found that the SUI scale reflected depressive cognitions, particularly helplessness and hopelessness two emotions linked to recidivism in females. Benda (2005) found that a history depression, fearfulness and suicidality were associated with a women's return to prison.

Correctional studies have provided a link between recidivism and factors measured by the STR scale. Benda (2005) found that, in addition to depression and suicidality, a recent history of stress was correlated to a woman's return to prison. This may include both the actual stressors as well as the individual's perception of events.

Other studies have found that interventions that improve an individual's ways of handling stress have decreased the probability of recidivism. Hunter & Hughes (1993) found that a 12-week course in Stress and Anger Management produced a significant decrease in violent crimes among male releasees and lengthened time in the community prior to reconviction. The Correctional Services of Canada (2007) reviewed several studies and found that interventions designed to assist female offenders with stress and anger had a significant impact on women inmates in positive ways, including teaching them to walk away from conflict, think before they act and to have an increased feeling of power over their lives.

The NON scale reflects the level of support and quality of relationships an individual perceives in the environment. The impact of both positive and negative relationships on female offenders is well-documented (Benda, 2005; Laub et al.,1998; Leverentz, 2008). The female pathway to crime has been strongly linked to a relationship with a criminogenic male (Benda, 2007; Smith, 2006). Wahl (1993) found that male and female inmates did not differ in ranking the importance of eight of the most commonly reported stressors associated with prison life but that females described the severity of these stressors differently. The most severe stressor for females included the separation from their children. Many of the incarcerated women in the Wahl study were single mothers who felt a particular loss when not allowed to see their children or participate in their children's lives. It is possible that the children provided support to the female offenders or that the offender perceived a lack of support from the institution when visits

were not allowed.

The RXR scale measures the individual's amenability to interventions such as substance abuse treatment. Extensive research in the literature suggests that substance abuse and addiction are linked strongly to female recidivism. As such, Messina et al. (2006) reported that the Treatment Rejection scale is a likely measure of recidivism potential. So frequently is it involved in criminal behavior that substance abuse treatment was listed as a critical need on a National Institute of Justice survey administered to jail administrators (Morash, Bynum, & Koons, 1998).

Gap Regarding the PAI and Recidivism Female Offender

Female offenders remain an understudied population in the prison system. Although the correctional system functioned on the assumption that males and females were similar in all ways but gender, several studies have suggested that males and females go to prison for different reasons and return to prison for different reasons as well. The risk factor tools are used in correctional setting have been considered gender neutral until studies have indicated otherwise. Largely developed for and normed on males, they are of limited use in the identification of the risk factors affecting women and informing the development of interventions to prevent recidivism.

This study proposed to fill the gaps in the literature pertaining to female offenders in general and the effectiveness of a widely-used personality assessment, the PAI, as an indicator of recidivism risk factors. While preliminary studies have suggested that the PAI shows promise in predicting risk factors related to recidivism in males, very few

have investigated this instrument with female inmates and only one study to date has investigated the Treatment Consideration scales as predictors of recidivism, and only the AGG scales were included in the study.

Importance of Studies Investigating the PAI and Female Offenders

The monetary and social costs of incarceration are considerable. The United States' bill in 2004 for incarceration has been *conservatively* estimated at around $42 billion annually by one group (Administrative Office of the US Courts, 2004). A more recent estimate of the cost of incarcerating the nation's offenders was approximately $60 billion per year (Second Chance Act, 2007). This was more than six times the $9 billion that was spent 25 years ago (Second Chance Act, 2007). The cost of incarceration only increases when considering any population of offenders other than males under the age of 60 (Second Chance Act, 2007). For that population, which comprises the bulk of the prison population, states spend an average of approximately $22,000 per year (Second Chance Act, 2007).

As a result of the Three Strikes Law, which has created a sharp increase in those serving a life sentence, the population of older offenders is rising (Second Chance Act, 2007). Housing an offender that is over the age of 60 costs approximately $60,000 per year (Second Chance Act, 2007).

The cost of incarceration for women is even higher. In Washington State, for example, the cost of housing a male inmate ranged from a low of $22,063 at the low-security, all-male Cedar Creek Correctional Center work camp to a high of $39,772 at the

Monroe Correctional Complex, an all-male maximum-security facility (WSDOC, 2008). The cost to house female inmates at the Washington Correctional Center for Women, a mixed-custody, all-female facility, was $42,179 per year. In Florida, the cost for a male inmate was approximately $55.09 per day (FDOC, 2009). For females, it was nearly 50% higher, approximately $74.50 per day (WSDOC, 2008).

Even at the higher expenditure rate than for males, many have asserted that programming based on the assumption that male and female offenders are identical are likely to fail (Brennen, 2007; Bloom et al., 2003; Maurutto & Hannah-Moffat, 2006). Modley (2000) commented that the high number of women offenders adds to the sense of urgency to understand why so many women enter the system, why they keep returning to our corrections systems, why they keep failing upon after release and what alternative and more effective strategies for supervision and for treatment might be available. Morton (2007) and others have asserted that programming needs to be designed with consideration given to gender differences if they are to be effective.

Women have been found to perceive stressors differently from men, to have higher levels of pre-incarceration trauma and to often underestimate their needs when they leave prison, higher levels of mental illness and more severe substance addiction (Bloom, Owen, & Covington, 2003). Further, women are often responsible for children upon release from prison and interventions designed without this important factor are likely to fail both the parent and the child (Bloom et al., 2003).

The current classification tools are insufficient and inappropriate for determining females who are at risk for recidivism (Brennen, 2007; Maurutto & Hannah-Moffat, 2006). Research into gender-responsive alternatives are needed that can identify those female offenders who are at risk for recidivism and allow for the provision of pre and post release interventions to reduce post-release failure.

Chapter 3 follows this section, and contains a discussion of the methodology of this study, a thorough description of the PAI and a description of the population, sample, research design, and statistical analysis.

Chapter 3: Research Methods

Introduction

This chapter includes a description of the design, sample, instrumentation, data analysis, and ethical considerations involved in this study. An overview of the design of the study includes a rationale for why this particular research design was selected. Characteristics of the sample and sample size, as well as a description of the instrumentation, are included. Finally, the data collection process and analysis are discussed.

Research Design and Approach

Archival data was used in this study to determine to what extent the Treatment Scales of the PAI predicted recidivism within 31/2 years post release. This design was chosen as a true experimental design is not often possible in prison settings. The participants were newly incarcerated female inmates who were administered the PAI upon entrance into the Washington State penal system. The archival data considered included only those inmates who were incarcerated in 2006 that were released during the study period (until August 9, 2010). The results on the PAI Treatment Scales of recidivators and nonrecidivators were compared.

Data from the PAI as well as selected demographics were analyzed in this study. These data were taken from the test protocols maintained at the Washington Correctional Center for Women and the Offender Management Network Information (OMNI) system maintained by Washington State Department of Corrections. The use of archival data allowed the inclusion of adequate PAI test results necessary to establish statistical significance. Analyses were conducted to measure the differences in PAI Treatment Consideration subscales between recidivators and

nonrecidivators. The design of this study and the use of a survival analysis were chosen as they best utilized the PAI data from WCCW in addressing the question of recividism among female offenders (Maltz, [1984] 2001; Pezzullo, 2009). It utilized data from an instrument, the PAI, that is routinely administered at WCCW, as a predictor of recidivism, and built on previous research that indicated the PAI possessed predictive validity of recidivism (Morey, 2007; Morey & Hopwood, 2006; Caperton, et al.2004; Walters et al. 2003; Morey & Quigley, 2002; Edens et al.,2001;Rogers et al., 1998; Salekin et al., 1998; Morey, 1991). This study design allowed for the control of other factors that have been found to contribute to recidivism such as age of the inmate, type of crime and race of the inmate (Marks, 2009; Marbley & Ferguson, 2005;Sampson & Laub, 2003; Semmons, 2006; Skopp et al., 2007;Quinsey et al., 1998.

A Cox proportional hazards model for data analysis was utilized in this study. Cox-type regression models are the analysis of choice for recidivism studies over more traditional methods, such as a logistic regression, because it handles cases in which the observed event does not occur (Garson, 2009; Pezullo, 2009). These cases are known as "censored" (Garson, 2009; Pezullo, 2009). Cox-type models also handle time varying independent variables, assume no base rate for the hazard, and do not require the researcher to specify the shape of the hazard rate over time (Garson, 2009; Pezullo, 2009). In this study, the hazard is recidivism. For this reason, the Cox-type models are considered full information methods as they use all available information (Garson, 2009; Pezullo, 2009). According to Garson (2009), researchers such as Box-Steffensmeier and Jones (year) and Buckley and Westerland (year) have noted that there are

few instances in which a parametric duration model would be preferred over a Cox-type model for most social sciences applications such as the study of recidivism.

Participants

Data was gathered from archived PAI protocols from female inmates who entered the Washington Women's Correctional Center between January and December, 2006, and who were subsequently released during the observation period of January 1, 2006 to August 9, 2010. The data were previously gathered through routine assessments of all individuals who were incarcerated at WCCW and thus were not subjected to additional assessments or procedures. The data were consistent with the type of recidivism survival analysis model proposed by Maltz ([1984] 2001) and Pezzullo (personal communication, September 21, 2009) and widely accepted in current studies of recidivism (Kleinbaum & Klein 2005;Douglas et al., 2001; Lidz et al., 1993). Additionally, demographic information and data deidenfication were readily available through the Washington State Department of Corrections. The Walden University IRB approval number, 06-08-10-0327780, was assigned after the application was reviewed and approved.

Sample Size

In general, the more subjects studied, the more precisely the Cox regression coefficients can be estimated, the more reliable the resulting prognostic formulae will be, and the more statistical power will result with which to conclude that some PAI score is significantly associated with outcome (Pezzullo, personal communication, September 21, 2009). Formal sample-size calculations for a study of this type would require the specification effect sizes of

importance for each of the PAI scores, along with estimates of the variability of these scores, and this information is not available to any degree of reliability (Pezzullo, personal communication, September 21, 2009). It should be noted that the power of this model is directly related to the number of events or hazards observed in the study rather than the number of individuals (Marchenko, 2007).

The following is a discussion of two approaches to estimating the sample size necessary to yield an adequate number of events. Each approach is based on the following: (a) PAI data for this study was estimated to be available on approximately 600 female offenders; (b) studies have found that the mean length of the sentences for female offenders ranged from approximately 20.5 months to 36 months, and in turn suggest that approximately half of the 600 offenders would be released within the 36 month study period (Aborn, 2005; Bonszar, 2007; Washington State Sentencing Guideline Commission, 2005), and (c) Brown (2007) reported a 30% recidivism for females offenders in Washington State who were in the low risk mixed offense, moderate risk mixed offense, and high risk drug categories such as those most likely to be released within the length of the study period of 3 years. Aborn (2005) and Bonszar (2007) found a recidivism rate of 57% in their studies. For this current study, the lower rate will be used as it corresponds most closely to the population being studied, that is, lower risk offenders with shorter sentences incarcerated in Washington State. This suggests that of the 300 possible releases, 100 would recidivate and as most recidivism occurs within the first few months of release, at least some of these would recidivate within the study period. The following section

assumes the relationship between the estimated sample size and the effect size detected with 80% power at the .05 alpha level (that is, considering $p \leq 0.05$ to indicate statistical significance).

Pezullo (personal communication, September 21, 2009) offered the first statistical analysis model that was considered for this study and was based on more traditional statistical models and assumed a 50% recidivism rate. When testing a numeric predictor, such as a PAI subscore, against recidivism by a student t test, where about half of the subjects have recidivated during the follow-up interval, a total of about 300 subjects would provide 80% power if the difference in the mean score between rearrested and nonrearrested subjects was 0.23 times as large as the within-group standard deviation (or, roughly, a "one-quarter-sigma effect size"). This is generally considered in the social sciences to be a "small" effect size (Cohen's conventions defines a 0.2-sigma effect size as "small"). Thus, this study is well powered, because it provides a good chance of detecting even fairly weak predictive ability in a PAI score (Pezzullo, personal communication, September 21, 2009).

The second model was suggested by Peduzzi, Concato, Feinstein, and Holford (1995) and is based on the simple formula: 10 * k/p, where k represents the number of predictors and p represents the anticipated rate of failure. In this study, there are eight predictors (three variables to be controlled for and five PAI scales) and the anticipated failure rate is around 30 %, yielding the following: 10 * 8/.30 = 267 total sample size, 30% of which would be expected to recidivate. This yields an estimated event occurrence of 80, that is, an estimated number of 80 recidivators, from this sample size of 267. This model is in close agreement with the second model. Therefore, these two models supported an anticipated minimal hazard occurrence of 80 to 100

individuals and would provide adequate power for this analysis (Pezzullo personal communication, 2009).

Instrumentation

The PAI is a 344-item, self-administered inventory of adult psychopathology (Morey, 2007). It consists of 22 nonoverlapping full scales covering the constructs most relevant to several mental disorders (Morey, 2007). These scales include four validity scales, 11 clinical scales, five treatment scales, and two interpersonal scales (Morey, 2007).

The PAI measures several constructs of interest in the forensic setting, such as aggression and antisocial features (Morey 2007; Piper-Deschenes et al., 2007;Morey & Quigley, 2002; Quinsey, 1998). It is written at an approximately fourth grade level, which is of particular interest in the correctional setting in which the rate of literacy is lower than in the unincarcerated population (Morey, 2007; Morey & Hopwood, 2006). Additionally, it was developed for use with both males and females, thus avoiding a current and major limitation in criminology (Morey, 2007; Morey & Hopwood, 2006). It was developed on a sample population that approximated the U.S. census in race and gender (Morey, 2007).

Reliability

The reliability of a test refers to the consistency of the measurement. The reliability of the PAI has been determined by several studies and involved the use of the coefficient (Cronbach) alpha (Morey, 2007). The Cronbach alpha is an estimate of all possible split-half combinations of the items in the test (Morey, 2007). This approach was considered the best approach as all of the items in each scale were assumed to indicate the same construct (Morey, 2007).

Internal consistency alphas for the PAI ranged from .81 based on the census-matched normative sample, to .86 for the clinical sample to .82 college samples (Morey, 2007). Morey (2007) noted that internal consistency estimates tended to be lower for ICN and INF than other scales as the items within those scales were not designed to measure substantive theoretical constructs but are indicators of random answering and would, therefore, be expected to have little correlation.

Morey (2007) commented that the PAI was developed with an effort to minimize or eliminate test bias related to age, gender, and race/ethnicity. Through a process of elimination of biased test questions, the internal consistency estimates for the PAI was found to be comparable across different demographic groups (Morey, 2007). Those scales that showed variations were found to reflect differences found between populations at large, rather than a function of biased test results (Morey, 2007). An example of this variation between age populations was the level of drug usage occurring more frequently in younger than older populations (Morey, 2007).

Test-retest reliability was determined through two administrations of the PAI to two different samples. These included a community sample in which the test was readministered 24 days from the initial administration and a sample of college students in which the test was readministered 28 days from the initial administration (Morey, 2007). Due to the nature of the scales, test-retest reliability differed among the subscales (Morey, 2007). Overall, Morey (2007) reported that the absolute changes over time were quite small, three to four T-scale points for most subtests. The subscales that measured stress and environmental support were the most likely to change, and likely reflected the more transient nature of the items being measured,

suggesting that they may be altered over time factors (Morey, 2007). In terms of this study, Morey's (2007) findings suggest that interventions provided while female offenders are imprisoned may positively change these perceived levels of stress and environmental support.

Validity

The PAI was initially validated based on comparisons to the best clinical instruments available at the time (Archer, 2006). Since that time, hundreds of validation studies have been conducted on the PAI and subtests (Archer, 2006; Morey, 2007). The revised professional manual contains validation studies that compare the PAI to more than 50 other measures and with clinical, normal, and correctional samples (Morey, 2007). The following is a brief summary of some of the noteworthy studies validating the each subtest. Special attention is given to correctional studies.

Validity scales. The PAI validity scales have been extensively studied and compared to other instruments such as the MMPI and the SIRS. Morey (1991) reported that the INF and ICN scales correctly identified 99% of the simulated profiles. Morey also reported that individuals scoring above the threshold on the PIM were 13.9 times as likely to be in the positive dissimulation group as compared to the control/community sample. Subsequent studies on the PIM have further supported the ability of these scales to distinguish simulated "fake good" protocols from actual protocols in which the individual attempted to present an overly-positive impression (Archer, 2006). Peebles and Moore (1998) found similar results with a cut score of 57T resulting in identification of 85% of fake-good from honest responders. Initially developed on a sample of college students who were coached in symptomology as compared to naïve

clinical and normal samples, the NIM showed promise in differentiating between the two groups (Peebles & Moore, 1998). Subsequent research has shown mixed results, with one study differentiating between actual and feigned depression, while another differentiated between actual and feigned schizophrenia (Edens, Cruise, & Buffington-Vollum., 2001). Edens et al. (2001) reported that only group study has been conducted in the forensic study that investigated the NIM index. Data from Rogers et al., (1998) and archival data from Rogers et al. (1998) were combined and found to differentiate between feigned and nonfeigned profiles. Classification accuracy was found in a study conducted by Morey and Lanier (1998). In other studies, mixed results have been found in differentiating real and faked PTSD, and misidentifying alcoholics (Calhoon et al., 2000; Liljequist et al., 1998). Liljequist et al. (1998) found that the Malingering Index (MAL) correctly classified 45% of faked PTSD simulators. In forensic settings, the MAL was found to correlate with the SIRS-Symptom Combinations, Improbable, and Absurd Symptoms scales with a cut score of greater than or equal to five applicable to both correctional and clinical settings to indicate feigning (Rogers et al., 1998). However, Edens et al. (2001) noted that in reality, a cut scale of greater than or equal to five may not be very useful, as few of the feigners scored at that level.

Clinical scales. Archer (2006) reported that a number of instruments have been used to establish convergent and discriminant validity on the PAI clinical scales. Archer (2006) cited studies by Costa and McCrae (1992), Montag and Levin (1994), and Morey (1991) in which strong associations were found between neurotic spectrum scales such as Anxiety (ANX), Anxiety-related disorders (ARD), and Depression (DEP) and other instruments that measure

neuroticism, thus following hypothesized patterns. Edens and Ruiz (2005) reported that the ARD-T effectively diagnosed PTSD in inmates released from a forensic in-patient setting. The DEP scale demonstrated a large correlation with the Beck Depression Inventory and the MMPI Depression content scale (Archer, 2006). The PAI psychotic spectrum scales such as Paranoia (PAR), Mania (MAN) and Schizophrenia (SCZ) were found to correlate with a variety of other indicators of severe psychopathology (Archer, 2006).

Archer (2006) noted that personality disorders are common in forensic settings and represent increased risk factors for a variety of problem behaviors in the correctional setting. Among these are violence, substance use, and poor response to treatment (Archer, 2006). The two scales on the PAI that directly measure personality disorders are Borderline (BOR) and the Antisocial (ANT) scales. These have been found to identify borderline patients from unscreened controls with 80% accuracy and successfully identified 91% of the participants as part of a discriminant function (Archer, 2006). Edens and Ruiz (2005) reported that showed an exceptional ability to detect forensic inmates who were discharged with a borderline personality disorder diagnosis (AUC= 0.97, SE= .032). Other correlations were found with the NEO-PI and the MMPI Borderline scale (Edens & Ruiz, 2005).

The treatment consideration scales. To date, the aggression scales remain the most well-researched of the PAI scales with incarcerated populations. Walters, Duncan, and Geyer (2003) investigated the ability of the PAI to measure institutional misconduct in federal penitentiary inmates of both genders. Walters et al. (2003) found the AGG to be a robust measure of institutional misconduct, hence also a good measure of increased risk of recidivism

since these two factors have been linked. Salekin et al. (1998) found that the same scale also identified psychopathy and predicted recidivism in female jail inmates. Caperton et al. (2004) reported significant differences on AGG between inmates with and without general infractions. Rau (2002) found that female county jail inmates who scored above 70T on the AGG scale had significantly more disciplinary infractions than those who did not.

The AGG scale was been cross-validated with a number of other measures of anger and aggression in both general and incarcerated populations. Among the strongest of correlations (.83) was found between the PAI AGG scales and the NEO-Personality Inventory ([NEO-PI] Costa & McCrae, 1985) Hostility facet. This was followed by the correlation of .75 between the PAI AGG scales the Trait Anger Scale of the State-Trait Anger Expression Inventory ([STAXI] Spielberger, 1988).

The SUI scale is significant in the correctional area as levels of depression and hopelessness about the future that an individual is feeling have been linked to recidivism, making this scale a promising measure of these risk factors (Hersen, Hilsenroth & Segal, 2004; Morey, 2003). Studies of the SUI scales among correctional populations have supported discriminant validity of these scales. Wang et al. (1997) found elevated scores among a sample of male inmates who made subsequent suicide gestures as compared to a group of male inmates who had not received a suicide assessment during the observation period. Dunham (2000) found similar results. These results take on further relevance when the link between suicide attempts, ideations, and recidivism are examined. Suicide attempts were found to be the strongest predictor of violent

recidivism in female inmates in one study, while another study found that a history of self-injury correlated with recidivism (Blanchette, 1997).

Morey (2007) pointed out that, due to the objective nature of the STR and NON scales, few criterion group studies are available. Of the studies that have been conducted, a link was found between stressors that were serious enough to precipitate an adjustment reaction and elevations greater than 60T (Morey, 1991).

Correctional studies have supported both the validity of the STR scale as a measure of perceived current stressors as well as supported the link between stress and recidivism. Benda (2005) found that, in addition to depression and suicidality, a recent history of stress was linked to a woman's return to prison. As this could also include the individual's perception of events, interventions to improve ways of handling stress have supported the assumption that stress is an important factor in recidivism. Hunter and Hughes (1993) found that a 12-week course in stress and anger management produced a significant decrease in violent crimes among male releasees and lengthened time in the community prior to reconviction.

Process for PAI Administration and Scoring Procedure

Upon entrance to the Washington State Women's Correctional Center, most inmates are routinely given a battery of assessment instruments to determine placement and housing needs. Beginning in 2006, the PAI was routinely included in this battery. The test protocols from 2006 were examined and data was gathered from these protocols on women who were administered the PAI during the calendar year 2006 and released between completion of the test and the end of the observation period (January 1, 2006 and August 9, 2010). Corresponding demographic and

recidivism data was provided by the Washington state DOC research department. Washington state DOC also deidentified the data for final analysis. Therefore, data was not individually identified in this study, and individual inmates were not directly contacted.

Profiles with t-score above 75 on the ICN, INF, PIM, and NIM scales were excluded as potentially invalid, as recommended in the literature on the PAI (Morey, 2003; Morey, 2007). Data was analyzed using a Cox proportional hazards model.

Data Analysis

The data analyzed in this study consisted of eight independent variables including subtest T scores on the five PAI Treatment Consideration scales and three demographic factors including age at release, race and type of crime, and the dependent variable, recidivism. Data was analyzed on each of the participants for whom the PAI information is available from the calendar year 2006, and who were released during the observation period between January 1, 2006 and August 9, 2010. Independent variables consisted of the five PAI treatment consideration subscales scores. Outcome consisted of a) the subject's date of release; (b) date of rearrest if the subject was rearrested or date of last follow-up if the subject was lost to study, died, or had not been re-arrested at the time of follow-up; and (c) an indicator of whether or not the subject had been rearrested between the time of release and the time of follow-up. The interval of time (in days and weeks and fractions) between date of release and date of rearrest or follow-up was calculated by calendar arithmetic. The rearrest indicator indicates the censoring status of the data (censored if the subject had not been re-rrested; uncensored if the subject had been rearrested).

Data are presented descriptively in the form of tables and graphs. The subjects' PAI Treatment Consideration scores are summarized by recidivism (that is, separately for rearrested and not-rearrested subjects). Numeric variables are presented as mean, standard deviation, median, range (minimum and maximum); categorical variables are presented as counts and percentages. Standard procedures were used to screen data and adjust data as needed for extreme univariate or multivariate outliers. Descriptive data was also broken down tabularly and graphically by demographic or PAI score intervals.

Research question 1: After controlling for the specified demographics of age upon release, race, and type of crime, are the Treatment Consideration subscales significantly predictive of recidivism, as measured by time-to-event analysis?

***H_1*1** The coefficient of Treatment Consideration Aggression subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

***H_0*1**: The coefficient of Treatment Consideration Aggression subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

***H_1*2**: The coefficient of Treatment Consideration Suicide subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as

assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$2: The coefficient of Treatment Consideration Suicide subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$3: The coefficient of Treatment Consideration Stress subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$3: The coefficient of Treatment Consideration Stress subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$4: The coefficient of Treatment Consideration Nonsupport subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$4: The coefficient of Treatment Consideration Nonsupport subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$5: The coefficient of Treatment Consideration Treatment Rejection subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$5: The coefficient of Treatment Consideration Treatment Rejection subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

Summary

The first hypothesis states that the study would find no significant differences between the Treatment Consideration subscale scores of nonrecidivators as compared to recidivators. The second through fifth hypotheses are the focus of the study and would show a difference in the scores of recidivators and nonrecidivators. These hypotheses were examined to determine whether the scores would yield a hazards ratio that giving the chance of recidivating given survival up to the next increment of time ($X+1$). It was anticipated that statistically significant findings would provide data to support the use of the PAI as an alternative to the current risk assessment instruments that have been shown to have questionable validity with female inmates. Chapter 4 includes the results of the study, including a review of the findings and will further explore the hypotheses of this study.

Chapter 4: Results

Introduction

This chapter includes the results of the current study and is divided into three sections. The first section includes the review the findings, beginning with a description of the study participants, a presentation of results, and a description of how the results were evaluated to answer the research questions and hypotheses. Next is the section that provides further exploration of the study's hypothesis. The final section summarizes this chapter.

The Findings

This section includes an overview of the descriptive statistics of the population studied in this project including a breakdown by age, race, type of crime committed, average age at release, and number of offenders who did and did not recidivate. Further analysis of the data utilizing a Cox Proportional hazards model follows.

Descriptive Statistics

A total of 1027 offenders were incarcerated at the Washington Correctional Center for Women (WCCW) and were subsequently released during the observation period beginning 1/1/06 and ending on 8/9/10. Approximately 75% of the available test protocols were scored with partial data collected on those offenders with last names beginning with P through Z due to a malfunction of the scoring scanner. It is estimated that approximately 100 offenders would have been added to the total *N* from the unscored portion of protocols. This partial sample, while not strictly randomly assigned, was also not intentionally selected. As there are no indicators of

last names beginning with any particular letter corresponding with a change of criminal history or recidivism, it was therefore considered a representative sample.

The number of offenders on whom data was collected totaled 502. Of those, 19 were deemed to have invalid test results due to high validity scale scores, based on female correctional norms. Of the 483 participants, 5 cases were excluded due to missing data on the Stress or Treatment Rejection scales. After data were screened for multivariate outliers, another three cases were excluded. Of those remaining 474 participants, 89 recidivated after release, yielding an 18.77% rate of recidivism. The proportion of recidivators to nonrecidivators was within the required number of "events" for a Cox proportional hazards analysis.

Table 3

Sample Size, Validity, and Rates of Recidivism

Characteristic	*N*	Percentage of Total Sample
Initial Sample Size Collected	502	N/A
Number of Invalid Protocols	19	3.8%
Total Missing Values	5	.01%
Excluded Multivariate Outliers	4	.006%
Total Valid Sample Size	474	100%
Number of Recidivated Participants	89	18.8%
Number of Violent Offenders	116	24.5%
Number of Nonviolent Offenders	345	72.8%
No Offense Indicated	13	2.7%

Of the 474 total participants, 360 (75.9%) were White, 50 (10.5%) were Black, 20 (4.2%) were North American Indian, 8 (1.7%) were Pacific Islander, and 36 (7.6%) were Hispanic (Table 4). Due to the uneven distribution of White offenders as compared to minority offenders, a new race variable was created that dichotomized the original race categories into two categories: minority = 0 (N = 114, 24.1%) and majority (White) = 1 (N = 360, 75.9%). This dichotomized version was used in further analysis.

Table 4

Frequency Distribution for Race

		Frequency	Percent	Valid Percent	Percent Cumulative
Valid	White	360	75.9	75.9	75.9
	Black	50	10.5	10.5	86.5
	Native American	20	4.2	4.2	90.7
	Asian/PI	8	1.7	1.7	92.4
	Hispanic	36	7.6	7.6	100.0
	Total	474	100.0	100.0	

The majority of the offenders (N = 345, 72.8%) had committed nonviolent offenses, while 116 (24.5%) had committed violent offenses. Thirteen offenders (2.7%) had no offense indicated. The mean age at release of the participants was 34.50 years and these participants

were out of prison an average of 1021 days before the end of the study or return to prison (Table 5).

Table 5

Days Out of Prison and Age at Release (N=474)

	Range	Minimum	Maximum	Mean	Std. Deviation
Days Out	1570	73	1643	1019.85	366.88
Age At Release	56	18	74	34.50	9.34

Research Questions and Data Analysis

This study addressed the following question: After controlling for the specified demographics of age upon release, race, and type of crime, are the Treatment Consideration subscales significantly predictive of recidivism as measured by time-to-event analysis? Five hypotheses evolved from this research question and are outlined below along with their corresponding null forms.

H_1**1**. The coefficient of Treatment Consideration Aggression subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

H_0**1**: The coefficient of Treatment Consideration Aggression subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero

as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$2: The coefficient of Treatment Consideration Suicide subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$2: The coefficient of Treatment Consideration Suicide subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$3: The coefficient of Treatment Consideration Stress subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_0$3: The coefficient of Treatment Consideration Stress subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

$H_1$4: The coefficient of Treatment Consideration Nonsupport subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

H_0**4**: The coefficient of Treatment Consideration Nonsupport subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

H_1**5**: The coefficient of Treatment Consideration Treatment Rejection subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

H_0**5**: The coefficient of Treatment Consideration Treatment Rejection subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero as assessed by a Cox proportional-hazards regression model after controlling for the specified demographics.

PAI Treatment Scales scores ranged from 28 to 93 and were based on female offender norms. Normal limits varied by scale and, therefore, must be interpreted scale by scale. Score means ranged from 49.08 to 51.96 with standard deviations ranging from 9.49 to 10.53 (Table 6).

Data were analyzed using a Kolmogorov-type supremum test to confirm that the proportionality assumption was met. Hazard or risk ratios were derived by the standard exponentiation of the coefficient $\log_n^{\beta}$.

Table 6

Treatment Scale Scores Descriptive Statistics (N=474)

Scale	Range	Mean	St.Dev.	Median	Skew	Kurtosis
Aggression (AGG)	33 - 81	49.08	10.53	47.5	.75	- .037
Suicidal Ideation (SUI)	42 - 93	49.58	10.57	46	1.67	2.810
Stress (STR)	28 - 72	49.95	10.38	50	.18	- .741
Nonsupport (NON)	36 - 85	49.54	10.40	48	.73	- .087
Treatment Rejection (RXR)	33 - 80	51.96	9.47	52	.17	- .538

The three potential confounding independent variables of age at release, type of crime, and race were individually analyzed (Table 7). Age at release was the only factor in covariate screening that showed significance. Therefore, the other two factors were excluded from the model. The Treatment Scale scores were analyzed and controlled for age at release. Data were analyzed in increments of one point for the PAI scales and one day of release before either recidivating or the end of the study (Table 8).

Table 7

Covariate Screening of Age at Release, Offense Type, and Race on Recidivism

Demographic	Chi Square	df	Sig.	Coefficient β	SE	Wald	Sig.	Hazard Ratio e^{β}	Confidence Intervals
Offense Type	.725	2	.696						
Race	1.123	1	.289						
Age at Release	7.149	1	.008	-.032	.012	6.801	.009	.969	.946 - .992

Table 8

Rate of Recidivism by Treatment Scale Scores Controlled for Age at Release

Scale		Chi Square	df	Sig.	Coefficient B	SE	Wald	df	Sig.	HR e^B	95.0 % CI for e^B
AGG x Age at Release	AGG	.041	1	.840	.002	.010	.041	1	.839	1.002	.982 - 1.022
	AGE				- .032	.012	6.566	1	.010	.969	.946 - .993
SUI x Age at Release	SUI	.013	1	.910	- .001	.012	.013	1	.910	.999	.976 - 1.022
	AGE				- .032	.012	6.636	1	.010	.969	.946 - .992
STR x Age at Release	STR	3.089	1	.079	.018	.010	3.104	1	.078	1.018	.998 - 1.038
	AGE				- .032	.012	6.720	1	.010	.969	.946 - .992
NON x Age at Release	NON	3.812	1	.051	.019	.010	3.968	1	.046	1.020	1.000 - 1.039
	AGE				- .034	.012	7.580	1	.006	.967	.944 - .990
RXR x Age at Release	RXR	12.147	1	< .001	- .039	.011	11.736	1	.001	0.962	.944 - .991
	AGE				- .034	.013	7.148	1	.008	.967	.940 - .983

Hypotheses Evaluation

Analysis-$H_1$1 Hypothesis 1 predicted that the PAI Aggression (AGG) subscale would be predictive of "recidivism-free survival" as assessed by a Cox proportional-hazards model after controlling for selected demographics. The Aggression subscale showed no clear predictive value. Therefore, the null hypothesis was not rejected.

Analysis- $H_1$2. Hypothesis 2 predicted that the PAI Suicidal Ideation (SUI) subscale would be predictive of "recidivism-free survival" as assessed by a Cox proportional-hazards model after controlling for selected demographics. The SUI subscale showed no clear predictive value. Therefore, the null hypothesis was not rejected.

Analysis- $H_1$3. Hypothesis 3 predicted that the PAI Stress subscale would be predictive of "recidivism-free survival" as assessed by a Cox proportional-hazards model after controlling for selected demographics. The resulting analysis of the Stress subscale approached significance (p = .078), suggesting that there may be a relationship between the subscale scores and recidivism. However, for this current study, the null hypothesis was not rejected. Future investigation is warranted, possibly based on an item analysis.

Analysis- $H_1$4. Hypothesis 4 predicted that the PAI Nonsupport subscale would be predictive of "recidivism-free survival" as assessed by a Cox proportional-hazards model after controlling for selected demographics. The results of the analysis of the Nonsupport subscale fell just inside the .05 significance level and suggest that this scale might have weak predictive value, higher scores associated with shorter survival times. The null hypothesis was therefore rejected,

with the caution that the predictive validity of this scale should be further investigated before definite conclusions can be reached.

While controlling for age at release, a one point increase in the NON scale score was associated with a 2%[1] increase in the odds of a female offender recidivating. In terms of standard deviation, a one and two standard deviation increase (i.e., a 10.40 and 20.80 point raw score increase, respectively) were associated with a 21.8%[2] and 48.5% increase in respective odds to recidivate (i.e., for 1*SD*:). Across the full 49 point range of observed nonsupport scale scores (min 36, max 85), the highest score was associated with a 153.7% increase in odds to recidivate.

Analysis- $H_1$5. Hypothesis 5 predicted that the PAI Treatment Rejection (RXR) subscale would be predictive of "recidivism-free survival" as assessed by a Cox proportional-hazards model after controlling for selected demographics. The Treatment Rejection subscale showed strong predictive value roughly equivalent to that of age at release. Therefore, the null hypothesis was rejected.

While controlling for age at release, a one point increase in the RXR scale score was associated with a 3.8% decrease in the chance of a female offender recidivating. In terms of standard deviation, a one and two standard deviation increase in treatment rejection score (i.e., a 9.47 and 18.94 point raw score increase, respectively) were associated with a 30.9% and 52.2%

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[1] $100(e^{B}\text{-}1) = 100(e^{.019} - 1) = 2.00$

[2] $100(e^{B*SD} - 1) = 100(e^{.019*10.40}\text{-}1) = 100(e^{.1976}\text{-}1) = 100(1.218 - 1) = 21.8$

Across the full 47 point range of observed treatment decrease in respective odds to recidivate. rejection scores (min 33, max 80), the highest score was associated with an 84% decreased odds to recidivate compared to the lowest score.

By comparison, while controlling for RXR score, a one year increase in age at release corresponded to a 3.30% decrease in odds to recidivate, a 1 *SD* increase in age at release (9.34 years) corresponded to a 27.2% decreased risk, and a 2 *SD* increase corresponded to a 47.0% decreased recidivism risk.

Summary

A brief introduction of the study, followed by a description of the study sample, including age at release, race, and type of crime was included in this chapter. The PAI scale scores were discussed and descriptive statistics on the data were presented.. Next, the research questions and hypotheses were reviewed along with the results from the study.

Increases in the NON scale score were associated with shorter time to failure, or return to prison, while increases in the RXR score were associated with longer time until return to prison. Findings also supported the current theory that as age increases, criminal behavior decreases. The consistent significance of age for all PAI subscale scores suggest that age remains a potent predictor of recidivism.

The results of this study of the PAI subscales suggest that the NON scale may be of value in predicting which female offenders will return to prison. Further, this study found that the RXR offers even more predictive value in determining which female offenders will return to prison

after release. As this is different from the results found with male offenders on this subscale, this study supports gendered differences in response to assessment instruments.

Chapter 5 includes a discussion of the study's findings and includes an interpretation of the findings, implications for social change, and recommendations for further action and study.

Chapter 5: Discussion

Introduction

This chapter includes a discussion of the study findings and consists of four sections beginning with an overview of the study, followed by an interpretation of the findings, implications for social change, and recommendations for further action and study.

Overview of the Study

Female offenders are one of the most rapidly increasing populations in the prison system (Cropsey et al,, 2007). Most research on how to manage, treat, and impact recidivism has been conducted on male offenders due to their higher numbers, but also due to the assumption that few important differences existed between male and female offenders, an assumption that has been challenged by several researchers (Belknap, 2007; Belknap & Holsinger, 2006; Morash, et al.,1998; Daly, 1994).

Both the lack of research and the gender-neutral assumption have resulted in the usage of risk assessment instruments, such as the LSI-OR that may either over or under-identify women (Brennan, 2007; Cudjoe, 1996). This, in turn, leads to placement in environments that are often too restrictive or not restrictive enough, poor identification of at-risk women, and provision of inappropriate or ineffective programming (Brennan, 2007; Cudjoe, 1996). These failures lead to poor reentry preparation and limited impact on the problem of recidivism, wastage of limited state resources, and a revolving-door prison experience that further destabilizes the women offenders and their families (Brennan, 2007; Cudjoe, 1996).

This study was undertaken to address a gap in the literature to identify an alternative instrument that may be used to identify female offenders who are at risk for recidivism after they are released, PAI (Morey, 1991). The PAI is a 344-item, self-report inventory that is widely used in correctional settings (Walters et al., 2003;Morey, 1991) The aggression subscale, in particular, has already been found to predict both female recidivism and institutional misconduct, the latter of which has been linked to eventual recidivism (Walters et al.,, 2003; Salekin et al., 1998). While the Walters et al.(2003) study was conducted on federal penitentiary inmates, the Salekin et al.(1998) study was conducted on female jail inmates. Drawing on the previous two studies, this study was undertaken on female state penitentiary inmates in the area of recidivism and included all five treatment subscales of the PAI. The Treatment Consideration subscales were chosen as they align with several factors from the literature that have been linked to the gender pathways theory (Messina et al., 2006; Rumgay, 2004; Daly, 1994). This gap was addressed in this study to investigate the PAI Treatment Consideration scales as an alternative to the instruments currently used in the penitentiary system with female offenders.

This study analyzed the PAI Treatment Consideration scores of 474 female offenders who were incarcerated in the WCCW during 2006 and released between 2006 and 2010. The data were analyzed using a Cox Proportional Hazards analysis to determine the risk for recidivism upon release. Analysis of each subscale was controlled for age at release, race, and type of crime as these factors have been found in previous research to individually predict recidivism among both males and females. The key question was do the PAI Treatment scales predict risk of recidivism when controlled for age, race, and type of crime? The independent

variables were the PAI Treatment subscale scores; the dependent variable was recidivism or return to prison.

Although the PAI subscales were the primary focus of this study, important information was gathered about other areas of study as well, such as the effects of age, type of crime, and race on recidivism of women. These findings contribute to the overall knowledge about female offenders, about the reasons behind their return to prison, and about the PAI as a possible alternative or supplement to currently used classification tools. These findings may ultimately be used to help more clearly classify female offenders for more appropriate provision of interventions, thus increasing success rates and lowering their rates of return to prison.

The Cox survival analysis was used to determine whether the Treatment Consideration Scales of the PAI were predictive of a woman's risk of returning to prison before she recidivated. In survival analysis, this is referred to as the time to an "event" or failure, with recidivism designated as the event. The advantage of this model is that, in contrast to other more common models, it considers all data available and specifically does not exclude those who have survived beyond the study period. These individuals are referred to as "censored." In contrast to other survival models such as the Kaplan-Myer, the Cox survival analysis model considers multiple variables rather than a univariate analysis. The weakness in this model is that it does not assume, nor does it provide a base rate. In other words, an increase of 10 points in the RXR scale may be linked to the likelihood that the woman would return to prison compared to the individual with a lower score on that scale. It does not, however, quantify what the increase in risk equals in additional days of freedom or days until failure Nonetheless, the findings of this study are

important as they support the predictive validity of this tool as a supplemental risk assessment tool for the incarcerated female population.

The analysis found that race and type of crime, two predictors of recidivism that are frequently discussed in the literature, were not found to be predictive of increased risk of recidivism. Age at release, however, remained a significant factor in the analysis of every subscale, even if the subscale itself was not predictive. This is consistent with several other studies that assert that, similar to males, females also "age out of crime." Due to the salience of age as a consistent finding, it may be used as a benchmark with which to compare this study's findings of the predictiveness of the Treatment Rejection (RXR) scales. In fact, inverse changes in scores on the RXR scale resulted in a hazard rate that was equivalent to that of age.

Interpretation of the Findings

Age has been labeled as the most salient of predictors of recidivism, with the phenomenon of individuals aging out of crime widely accepted as a nearly universal truth. As with much of correctional research, the bulk of studies in this area have been conducted on men. The findings of this study further supported that assertion. With age alone in the model, a 1 year increase in age from age 18, the youngest age in the sample, the chances of recidivism for female offenders decreased by 3.1%. These findings suggested that aging is as important predictive for risk of recidivism for women as it is for men.

Race has been a longstanding factor in incarceration and recidivism rate in males and females. This was not found to be case in this study. Although the sample was primarily White, other ethnicities were represented. Nonetheless, the greater proportion of incarcerated Black

females nationwide cannot be ignored (Christian & Thomas, 2009) and suggest that other related regional socioeconomic factors, rather than racial ones, might be influencing those findings.

Nonviolent offenders have been identified as being more likely to return to prison than violent offenders. This was not found in this study, but it should be noted that the maximum sentence length was 4 years between the incarceration and the end of the observation period. While this included the majority of offenders at WCCW, who have, on average, an 18-month sentence, the observation period may not have allowed for inclusion of women with more serious and more violent offenses and longer sentences. Further study in this area would be merited.

The AGG, SUI, STR, and NON scales, while providing valuable diagnostic information, yielded findings that were not significantly predictive of recidivism. The AGG subscales were of particular interest in that they were investigated in previous studies on female offenders in predicting institutional misconduct and recidivism including Buffington-Vollum et al., (2003), Walters et al., (2003), and Salekin et al. (1997). While the AGG scale on the whole was not found to predict recidivism or misconduct in those studies, the verbal aggression subscale of the AGG scale was. The findings of this current study supported these previous studies in that the AGG scale, in general, does not predict recidivism. This current study did not, however, address the individual subscale scores and further investigation into individual AGG subscales would possibly yield different results. Likewise, the findings on the STR scale were not found to predict risk of recidivism. While it would be logical to assume that an individual under stress would be more prone to failure upon release, one possible explanation for this is that the factors measured by this scale may be time limited and reflect the offender's state of mind at the time of the

administration of the PAI. This scale, therefore, may not measure more longstanding type of stressors that would continue to affect the offender throughout her incarceration and up to her release date.

The NON scale was of particular interest when considering the gendered pathways theory in that incarcerated women are generally linked with criminogenic males (Daly, 1994). While reduced male recidivism is linked to connecting with a stable female partner upon release, with even greater recidivism decreases seen when the partners marry, successfully desisting females typically rely on female family members such as their mothers and are more likely to be unmarried (Benda, 2005). Although showing a weak effect, the findings in this study are nonetheless important, in that they underscore the effect on a female offender's success upon release being tied to a support system, whether it is through family, friends, or social support systems.

Higher scores on the RXR scale typically represent unwillingness to accept treatment or lack of readiness to change. Possibly the most unexpected finding of this study was the *inverse* relationship between the RXR scale and recidivism, with higher scores on the scale actually predicting a 3.8% lower risk for recidivism. Counterintuitive as these may seem, these findings were not entirely inconsistent with the literature that addresses this particular subscale. Morey (2007) reported that the RXR scales were actually lower in every set of clinical group norms as compared to community-based norms in nearly every study. Morey (1991) reported that although Edens and Ruiz (2005) found the expected increase in treatment compliance with RXR scores below 43 T for male offenders, this difference was not significant for female offenders.

Morey (1991) also found that higher RXR scores, suggesting less amenability to treatment, were also present in those who had strong social support systems and therefore appeared to be less motivated to seek treatment from outside sources.

The results of this study, in terms of what was found as well as what was not found, affect several areas. First, information was gained the area of general criminal theory, the development of which has historically been based on male offenders. Of particular interest are the findings on the salience of age as a predictor of criminal recidivism. Second, the use of the PAI with female offenders in corrections and as a screening tool within the correctional setting for application in classification, risk assessment, housing, institutional programming, release decisions and development of more effective reintegration programming. Third, implications within the gendered pathways theory were found due to the links between the elevated PAI NON scale and the importance of support systems to female inmates as identified by Daly (1984). Fourth, , the significant difference between males and females in the predictive validity of the RXR scales further underscores the difference between the two genders in assessing their need for help and intervention, with nonrecidivating female offenders more realistically their need for intervention pre release .

Implications for Social Change

Theory of Criminal Behavior

The population of female offenders is rising disproportionately to their numbers, but remains a smaller portion of the larger prison population (Warren et al. , 2008; Chesney-Lind & Pasko, 2004). Often, women of all custody levels are housed in one facility and limited

programming is available to them to prepare for release (Rumgay, 2004; Morash, 1998). Yet, they are affected by serious factors that further complicate the situation and make prison programming critical. Women tend to serve shorter sentences than males and have fewer months in prison during which to take advantage of offerings (Bloom, 2004; Rumgay, 2004; Morash et al., 1998) They are more often affected by mental illness, they often have background trauma to cope with, their potential male partners tend to be criminogenic, they are more seriously drug-affected than males, and they often have children to care for (Maurutto & Hannah-Moffat, 2006; Messina et al, 2006; Rumgay, 2004;). It is essential that they be identified early in their sentences and placed in appropriate and effective programming. Criminal justice practitioners rely on actuarial tools and other types of assessments although the validity of these across gender has been questioned (Maurutto & Hannah-Moffat, 2006; Wang et al., 1997; Coulson, 1996); .

The findings of this study were consistent with those of Gottfredson and Hirschi (1990) and Massoglia and Uggen (2007) who asserted that many people simply age out of crime. Women in this study showed a significantly longer survival time after release than their younger peers. This is important in that age seems to be a gender-constant factor that is associated with lower recidivism.

This research did not find a link between race and incarceration rates. Belle and Ducet (2007) asserted that black women are still incarcerated at seven times the rate of white women and are the fastest growing segment of the prison population. Black women were not found to be either incarcerated at a higher rate than other races, nor have a higher recidivism rate. Finally,

although property offenders tend to have higher reincarceration rates than violent offenders, this study found no difference between the two populations within the 4-year study period.

Implications as Applied to Gendered Pathways Theory

These results also are important within the context of the gendered pathways theory (Daly, 1994). This theory purports that many women who enter a life of crime have several risk factors that make them different from their male peers. (Daly, 1994). Among these are more intense and varied drug and alcohol abuse as well as having experienced failed support systems, especially family and marital relationships (Daly, 1994). The findings of this study emphasize that longer periods of recidivism-free survival on the streets are associated with a woman's having support system to turn to when they are back on the streets. Further, her assessment of her own need for treatment or interventions may appear to be resistance, when, in fact, she may possess accurate self-knowledge of what she needs to succeed.

Implications for Correctional Settings

This study found that older offenders stay out of prison longer once they are released. This is consistent with current research, and suggests that older women offenders may be good candidates for lower (and less expensive) custody levels, early release into work release programs or early release options, options which are both less restrictive to the female offender and less expensive to the institution.

Second, it validates the PAI as an important tool for use in corrections to augment the accuracy of currently used, possibly gender-biased, assessment tools. While not a replacement

for instruments such as the LSI-R, the PAI is currently used in many facilities, has correctional norms available, and could provide both clinical and risk assessment information.

Third, while the high scorer on the RXR is presumably more resistant to treatment, the female offender with high scores on the RXR scale was found to stay out of prison longer. This high-scoring offender may, in fact, be reporting an accurate assessment of her need for intervention through her answers on the PAI rather than showing resistance to treatment. The low scorer, presumably more amenable to treatment, may not just be more amenable, but actually be expressing a need for treatment or help and therefore may be more receptive to offerings prior to release. In particular, it suggests that women who have high scorers on the RXR scales should not be "written off" as not amenable to treatment. Instead, they should be viewed in the light of possibly already having formed effective support systems or having a more insightful appraisal of their need for treatment or change. Low scorers, on the other hand, may be reporting a valid need for treatment and expressing a desire to receive it.

Fourth, taken with the findings of the NON scale, the RXR scores also underscore the importance of support systems for women to remain out of prison for longer periods of time. Programming that encourages, builds or supports development of support systems would, therefore, be expected to pay dividends in longer periods of time out of prison, possibly also allowing the effects of aging to further reduce recidivism.

Conclusions

In this study, I found that a woman's time out of prison is lengthened when she perceives that she has an intact support system and that she may have an accurate perception of what she

needs to succeed. Keeping in mind that many female offenders are also mothers and have children to care for, support systems need to provide for maintenance of not just the released offender, but her children as well. These supportive services will likely include services such as daycare and preschool, as well as food, shelter and housing, and employment assistance that. Therefore, programming may be most effective if it focuses on areas that either support their support systems or encourage their independence. These women might be identified for quicker progression to lower custody levels, early release, work camp or work release placement. Pr-release activities might include education and employment training, assistance with childcare, drug treatment and housing, all geared towards reducing the burden on the supportive systems these women have in place and keeping them from returning to criminogenic partners out of economic necessity by increasing their self-sufficiency. The women and their children benefit from a more stable environment, reduced stress on the family unit and support systems. Rather than being a part of the revolving door offender community, these women stand a much better chance of becoming productive, contributing members of the community.

Recommendations for Further Study

Future research may build on these findings in the areas of female offenders and recidivism, age and criminal behavior, and the predictive value of the PAI in correctional settings. Specific studies would be valuable if directed towards how female offenders develop and utilize support systems and how they self-evaluate to determine the need for agency support, since these two factors appear to differ from their male counterparts. Additional studies with offenders who serve longer sentences and possibly have more severe crimes would also fill a gap

in the literature, as this study only considered women who had served a sentence of 4 years or less. As the racial balance of this study was primarily white, studies with larger proportions of minorities would also be valuable in furthering the research on female offenders.

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Herold-Prayer, Teri A. (DOC)

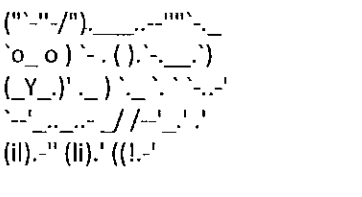
From: Herold-Prayer, Teri A. (DOC)
Sent: Thursday, November 03, 2011 10:25 AM
To: Marks, Nora K. 'Kris' (DOC)
Subject: WA DOC Research

Hi Kris,

I still have your research project in open status – can I get a copy of your final report in order to close out this project? I hope everything went well.

Teri

Teri Herold-Prayer
Research Manager
Washington Department of Corrections
7345 Linderson Way SW
Tumwater, WA 98501
Mail: DOC. P.O. Box 41113. Olympia, Wa 98504
Phone: 360.725.8265
Fax: 360.586.0613
taheroldprayer@doc1.wa.gov



Go Cougs!

Herold-Prayer, Teri A. (DOC)

From: Marks, Nora K. (DOC)
Sent: Sunday, August 29, 2010 1:29 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: RE: Second round of data for PAI research.

Teri: I ended up just using the data I had as WCCW didn't want to take a chance on me damaging the scanner with another 100-300 protocols. My Chair and committee accepted the data as I had an N of 483 with 95 recidivators. Not exactly a random sample, but a large enough one to be representative. I will describe the absence of data on inmates with last names P-Z as a weakness in the study in chapter 4.
Thanks for all your help-
Kris

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

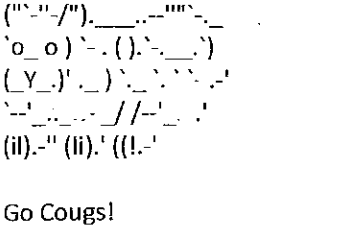
From: Herold-Prayer, Teri A. (DOC)
Sent: Wednesday, August 25, 2010 3:03 PM
To: Marks, Nora K. (DOC)
Subject: Second round of data for PAI research.

Kris,

Here is the new data set for you to work from.

Teri

Teri Herold-Prayer
Research Manager
Washington Department of Corrections
7345 Linderson Way SW
Tumwater, WA 98501
Mail: DOC. P.O. Box 41113. Olympia, Wa 98504
Phone: 360.725.8265
Fax: 360.586.0613
taheroldprayer@doc1.wa.gov



Go Cougs!

Herold-Prayer, Teri A. (DOC)

From: Graham, Peter C. (DOC)
Sent: Monday, August 16, 2010 9:05 AM
To: Herold-Prayer, Teri A. (DOC)
Subject: RE: here you go
Attachments: RT-180 _PAI FINAL DATA.xlsx

Here is what is included:
Docnum
Initial Admit Date
Initial Release Date
Date of Birth
Age at Release
Race
Race – Formatted
Hispanic Flag
Ethnicity
Ethnicity – Formatted
Offense Type – Offense Formatted – most serious offense we have on record for the offender.
Readmit Date – based on the first regular readmission to prison.

Peter Graham
Management Analyst
Planning and Research
(360) 725-8619
WA State Department of Corrections

From: Herold-Prayer, Teri A. (DOC)
Sent: Thursday, August 12, 2010 2:59 PM
To: Graham, Peter C. (DOC)
Subject: here you go

Teri Herold-Prayer
Research Manager
Washington Department of Corrections
7345 Linderson Way SW
Tumwater, WA 98501
Mail: DOC. P.O. Box 41113. Olympia, Wa 98504
Phone: 360.725.8265
Fax: 360.586.0613
taheroldprayer@doc1.wa.gov

Go Cougs!

The score of 5 in this inmate's scores should be 52.

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

Herold-Prayer, Teri A. (DOC)

To: irb@waldenu.edu
Cc: Marks, Nora K. (DOC)
Subject: Nora Marks Research Acceptance
Attachments: Kris Marks LOA 7.28.2010.pdf; Kris Marks letter of acceptance 7.28.2010.pdf

Attn. Jenny Schearer,

The Washington Department of Corrections is pleased to inform you that Nora "Kris" Marks application has been reviewed and accepted by Secretary Vail, and the Research and Review Committee. Attached you will find the official documents that confirm her research. If you should have any additional questions concerning Ms. Marks research please don't hesitate to email/call.

Teri Herold-Prayer
Research Manager
Washington Department of Corrections
7345 Linderson Way SW
Tumwater, WA 98501
Mail: DOC. P.O. Box 41113. Olympia, Wa 98504
Phone: 360.725.8265
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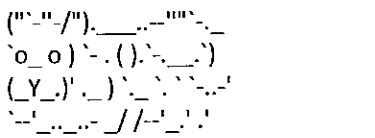

Go Cougs!

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS
P.O. Box 41100 • Olympia, Washington 98504-1100

July 28, 2010

Nora "Kris" Marks
803 Alvarado Terrace
Walla Walla, WA 99362

Dear Nora "Kris" Marks:

I am pleased to inform you that your proposal titled "The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates," was reviewed by the Department's Research Review Committee and approved by Secretary Eldon Vail.

It is our understanding that you will adhere to the protocols outlined in your proposal. Any changes must be approved by me in advance of the implementation of the change. WCCW will scan your laptop upon entering the facility and it is agreed that you will not use an air-card, and that your laptop will be password protected. You will need to make arrangements with WCCW prior to your arrival to ensure that all security protocols are met prior to entering the facility. You must submit:

1. A progress report, Form J, in the Research Review Project Packet in **six months** if the research project is not completed.
2. A final copy of your report.
3. Any publications derived from your research to the Department of Corrections at the above address.

If I can be of any further assistance to you during your project, please do not hesitate to contact me.

Sincerely,

Teri Herold-Prayer, Co-Chairperson
Research Review Committee

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS
P.O. Box 41100 • Olympia, Washington 98504-1100

July 27, 2010

TO: Eldon Vail, Secretary
Department of Corrections

FROM: Teri Herold-Prayer, Co-Chair
Research Review Committee

SUBJECT: PROPOSED RESEARCH PROJECT BY Nora "Kris" Marks

The Department's Research Review Committee reviewed the attached proposal titled "The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates". The Committee recommends approval of this research project.

The following is a summary of the proposed project:

The proposed research will take place at the Washington Corrections Center for Women. The research is aimed at determining the relationship between scores obtained from the Personal Assessment Inventory (PAI) treatment scales (Consideration and Validity scales), and its predictor of recidivism on female inmates. She will be looking at offenders admitted to WCCW during the year 2006 and subsequently released between 1/1/2006 – 12/31/2009.

Proposed Project **[4 ~~Approved~~** **[ ] Denied**

Eldon Vail, Secretary

THP
Attachment

" Working Together for SAFE Communities"

FORM A

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

PROJECT APPLICATION SUMMARY

Project Title: The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates

Principal Investigator/Researcher: Nora Kristine "Kris" Marks

Organizational Affiliation: Walden University

Objectives: To determine the relationship between recidivism and scores on the PAI Treatment scales of female offenders after controlling for selected demographics.

Methods and Procedures: PAI Treatment Consideration scales and PAI Validity scales will be gathered from female offenders who were incarcerated during 2006 at WCCW and released between 1/1/06 and 12/31/09. After controlling for selected demographics (age at release, ethnicity, type of crime-violent/nonviolent) data will be analyzed using a Cox Proportional Hazards model to determine the relationship between the Treatment Scales and length of time an individual remained out of prison. Data will be deidentified prior to being removed from the institution (WCCW) to protect the privacy of the offenders.

Significance of this Project: Most research in the field of corrections and most risk assessment instruments are focused on male offenders as they represent the largest population in the prison system. Female offenders, however, are the fastest growing segment of the correctional population. Research suggests that there are significant differences between males and females in their pathways into criminal behavior and factors the increase or decrease the risk of recidivism. At this time, it remains unclear how applicable research results from male offender studies are to female offenders. In addition, research also suggests that many of the actuarial instruments designed for males either over or underclassify females. Preliminary studies found that a commonly used personality assessment, the PAI, successfully predicted institutional maladjustment in male and female offenders. It also correlated significantly with the Psychopathology Checklist (PCL) in predicting psychopathic characteristics and recidivism in female jail inmates. This project endeavors to fill an important gap in the literature regarding female offenders, by examining a currently used personality assessment, the PAI, as a predictor of recidivism in female offenders. The results may provide important information that could be utilized by Washington State DOC when determining risk levels or assessing programming or housing needs of female offenders.

FORM B

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

ADMINISTRATIVE INFORMATION SUMMARY

TITLE OF PROPOSAL: The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates

<table>
<tr><td colspan="2">DATE: 06/08/10

PRINCIPAL INVESTIGATOR/RESEARCHER:</td></tr>
<tr><td>Name:

Nora Kristine "Kris" Marks</td><td rowspan="2">Performance Site:

Washington Correctional Center for Women</td></tr>
<tr><td>TITLE/POSITION:
PhD Student</td></tr>
<tr><td rowspan="2">MAILING ADDRESS:

803 Alvarado Terrace
Walla Walla WA 99362</td><td>PROPOSED PROJECT DATES:
FROM: July 1, 2010 TO July 16, 2010</td></tr>
<tr><td>FUNDING SOURCE:
N/A</td></tr>
<tr><td>DAY TIME TELEPHONE:
509/386-4751

EMAIL ADDRESS:marks@bmi.net or
nkmarks@DOC1.WA.GOV</td><td>AFFILIATED WITH DEPARTMENT OF CORRECTIONS?

I work for DOC but am conducting the research as a PhD student through Walden University.
Yes ___x___ No _____</td></tr>
</table>

FORM C

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

BIOGRAPHICAL INFORMATION

Use one sheet for each of the personnel involved in the proposed project; number sheets consecutively.

NAME:	TITLE:	Affiliated with DEPARTMENT OF CORRECTIONS ?
Nora Kristine "Kris" Marks	PhD Student	Yes__x__ No_____

NAME AND ADDRESS OF EMPLOYING AGENCY OR ORGANIZATION

Walden University

EDUCATIONAL BACKGROUND (Degree(s) and institutions)

PhD Clinical Psychology	Walden University	Anticipated graduation date: November, 2010
MS Clinical Psychology	Eastern Washington University	1986
BS Psychology	Central Washington University	1982
AA General Studies	Yakima Valley College	1978

PROFESSIONAL BACKGROUND (positions and appointments)

Psychology Associate	Washington State Penitentiary	Current
School Psychologist	Private Practice	1992 to 2006
Mental Health Counselor	Lutheran Social Services	1993 to 1995
School Psychologist	ESD #123	1990 to 1993
School Psychologist	Kennewick School District	1988 to 1990
Executive Director	A Woman's Place	1984 to 1988
Mental Health Technician	Mid-Columbia Mental Health	1982 to 1984

SCIENTIFIC BACKGROUND (description of research activities and interests)

Understudied populations in the correctional system: female offenders, transgender inmates

FORM D

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

APPROVAL HUMAN SUBJECT REVIEW

To be completed by sponsoring agency or organization. (University, Professional Organization, Public Agency, Commercial Research Firm, etc.). Submit a copy of the official IRB approval letter.

SECTION 1:
Approval by Institutions or Organization **with** an Accredited Human Subject Review Board(s)

NAME: Pending - Jenny Sherer
TITLE/POSITION: IRB Dept
MAILING ADDRESS: Walden University 155 Fifth Avenue South Minneapolis MN 55401
EMAIL ADDRESS:

I have reviewed the proposed methodology and feasibility of the research project and recommend approval.

Signature **Date**

SECTION 2:
Approval by academic advisor or Chair of Advisory Committee of Research for graduate credit.

NAME: Dr. Matthew D. Geyer
TITLE/POSITION: Dissertation Chair/Instructor
MAILING ADDRESS: Walden University 155 Fifth Avenue South Minneapolis MN 55401
EMAIL ADDRESS matthew.geyer@waldenu.edu

Signature **June 9, 2010**
Date

 I have requested a modification of this to omit data use agreement & substitute project review approval - mkm

Reply | Reply All | Forward | Delete | Move | Add to

Message-ID : <OF8947A301.C463F7C1-ON8625773C.006C9325-8625773C.006C898C@email.waldenu.edu>
Subject : Conditional IRB approval-Nora Marks
From : IRB@waldenu.edu
Return-Path : <Jenny.Sherer@waldenu.edu>
Cc : research@waldenu.edu, matthew.geyer@waldenu.edu
Received : from CA-Gateway02.laureate-inc.com (ca-gateway02.laureate-inc.com [192.65.141.130]) by c2mail3.campuscruiser.com (8.13.8/8.13.1/TCC) with ESMTP id o58JjWQ5018964 for <nora.marks@waldenu.edu>; Tue, 8 Jun 2010 15:45:33 -0400 from wums01.waldenu.edu ([10.252.4.101]) by CA-Gateway02.laureate-inc.com (Lotus Domino Release 6.5.5FP1) with ESMTP id 2010060812453119-178709 ; Tue, 8 Jun 2010 12:45:31 -0700
MIME-Version : 1.0
Date : Tue, 8 Jun 2010 14:45:54 -0500
Sender : Jenny.Sherer@waldenu.edu
Content-Type : multipart/alternative; boundary="=_alternative 006C898A8625773C_="
To : nora.marks@waldenu.edu

Subject : Conditional IRB approval-Nora Marks

Date : Tue, Jun 08, 2010 02:45 PM CDT
From : http://my.campuscruiser.com/em2PageServlet?pg=wreadmail&tg=BaseReadmail&cx=22.295-1.100021195&msgId=1068769398#
To : nora.marks@waldenu.edu
Reply To : javascript:quickAddSwitch('IRB@waldenu.edu');
CC : research@waldenu.edu, matthew.geyer@waldenu.edu

Dear Ms. Marks,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates," conditional upon the approval of community research partner, as documented in a signed data use agreement. Walden's IRB approval only goes into effect once the Walden IRB confirms receipt of that data use agreement.

Your approval # is 06-08-10-0327780. You will need to reference this number in your dissertation and in any future funding or publication submissions.

Your IRB approval expires on June 7, 2011. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application materials that have been submitted as of this date. If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive an IRB approval status update within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you a made commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden web site or by emailing irb@waldenu.edu:
http://inside.waldenu.edu/c/Student_Faculty/StudentFaculty_4274.htm

FORM E

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

PROJECT BUDGET

Use as many continuation pages as needed. Please number pages consecutively.

Formal Budget – Provide Summary: N/A

No Formal Budget - Explain how the proposed research will be supported: Any associated costs will be paid by the investigator.

Significant Financial Interest: None.

Does any member of the research team have a significant financial interest in the research, or in its products, or in its sponsor? ☐ YES x NO

If Yes, please explain the nature of this financial interest and describe the monetary value of the financial interest:

FORM E1

STATE OF WASHINGTON
COOPERATIVE PROJECT CONTRIBUTIONS REQUESTED FROM DEPARTMENT OF CORRECTION

Project Title:

The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates

TO BE COMPLETED BY THE PRINCIPAL INVESTIGATOR/RESEARCHER: On the basis of your plans and your discussions with DEPARTMENT OF CORRECTIONS administrators, **please complete and sign Form E1 and send a copy of Forms E1 and E2, along with a copy of the proposal, to <u>each</u> administrator or data coordinator from whom resource contributions are requested.**

DEPARTMENT OF CORRECTIONS Contributions Requested:		
	YES	NO
1. DEPARTMENT OF CORRECTIONS Clerical Services		x
2. DEPARTMENT OF CORRECTIONS Facilities/Equipment:	x	
3. DEPARTMENT OF CORRECTIONS Case Records (Specify below)	x	
4. DEPARTMENT OF CORRECTIONS Computerized Records (Specify below)	x	
5. DEPARTMENT OF CORRECTIONS Assistance in recruiting Research Subjects (Specify below)		x
6. Other (Specify below)		

For each category checked above, please describe the specific contributions requested. For case records or computerized records, please describe the parameters of the data request (i.e., study group, time periods, geographic areas, data elements, etc. (Attach additional pages if necessary)
I will need access to a computer, desk or workspace in the area of WCCW in which the PAI test protocols are maintained, the PAI test protocols from 2006 and OMNI database for associated demographics. The data collection period is anticipated to last for no longer than one week.

I certify that I have discussed this proposal with Department of Corrections administrators and that, to the best of my knowledge, this form accurately describes the contributions requested for this research project.

Principal Investigator/Researcher (Type Name) Nora Kristine "Kris" Marks

Signature Nora Kristine "Kris" Marks Date: 6/8/10

Pending: Dr Ron Dahlbeck, Mr Cole, DCCW

Administrator or Data Coordinator to whom page E2 will be sent

FORM E2

STATE OF WASHINGTON
COOPERATIVE PROJECT CONTRIBUTIONS REQUESTED FROM
DEPARTMENT OF CORRECTIONS
ADMINISTRATORS/SUPERINTENDENT/SUPERVISOR

Project Title:

The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates

TO BE COMPLETED BY THE DEPARTMENT OF CORRECTIONS ADMINISTRATOR: On the basis of your plans and your discussions with the researcher and the information provided on Form E1, please estimate the costs of supporting this research project. If the contributions being requested are unclear, or if additional information is needed, please contact the Research Review Committee Chair. **Please complete and sign Form E2. Send to DEPARTMENT OF CORRECTIONS Research Review Committee, Chair.**

Estimated Costs of Department of Corrections Contributions:
1. Professional Services
2. Clerical Services
3. Computer Services (including staff-time)
4. Consumable Supplies
5. Other (Specify):

Type Name _____

Signature _____
Department of Corrections Administrator/Superintendent/Supervisor

Telephone _____

FORM F

PROJECT DESCRIPTION

Please note: the following information is taken directly from the dissertation proposal associated with this research project. Full citations contained in proposal -

Conceptual Introduction

The number of women in prison experienced a six-fold increase during the decade between 1985 and 1995 (Chesney-Lind & Pasko, 2004; Warren, Gelb, Horowitz, & Riordan, 2008). With the enactment of "get tough" drug laws and mandatory sentencing in the 1980's, women who were previously spared prison sentences based on duties to family and children, began to experience incarceration as frequently as males for the same crimes. As a result, the number of incarcerated women has grown steadily at a brisk pace as compared to men (Chesney-Lind & Pasko; Warren, Gelb, Horowitz, & Riordan,). In the 1990's alone, the number of women in prison rose 23% for women compared to 13% for men (Harrison & Karberg, 2002). The United States, which holds the largest incarcerated population in the world, numbered at some 2.3 million individuals in 2006, now incarcerates more females than any other country in the world, estimated at more than 186,000 for that same year (Hartney, 2006).

Although many actuarial tools have been found to predict recidivism among male inmates, none have been found to accurately predict recidivism in female inmates. A 1998 National Institute of Justice (NIJ) released a special report on female offenders that emphasized the differing needs between male and female offenders (Morash, Bynum, and Koontz). These differences were attributed primarily to the females' disproportionate levels of victimization from sexual or physical abuse and at least in part due to their responsibility for children (Morash, Bynam, & Koons). Since then, other factors found to affect recidivism rates in females more intensely. These include race, age, family support, social support, type of crime, and mental health status and/or substance abuse treatment.

Morash, Bynum, and Koontz (1998) further reported that parity between programs to prevent recidivism that were offered to women and men was difficult due to the small number of women as compared to men in the justice system. "Their needs can easily be overlooked when programs are designed and resources allocated" the report stated (Morash, Bynum, and Koontz, p. 2). Additionally, women offenders often underestimate the support they will need after release and face a higher risk of economic, social and psychological challenges when they return to society (Bloom, 2004; Rumgay).

The research problem proposed in this study is the identification of a recidivism risk assessment instrument that is valid for use with the rapidly-growing population of female offenders. The focus on reducing recidivism is a mandatory component for accessing government funding for certain offender programs (Second Chance Act of 2007). The instruments currently used are largely actuarial in nature and, once assumed to be "gender neutral", research has suggested that these instruments may, in fact, be of limited value with the female population. Coulson, Flacqua, Nutbrown, Giulekas, and Cudjoe (1996) reported that one widely-used measure, the Level of Service Inventory-Revised (LSI-R), is inaccurate for women and they recommended that it not be used with female offenders. They further reported that another measure, the Statistical Inventory on Recidivism-Revised (SIR), is equally inaccurate with that population and as a result, its use has been discontinued. These instruments, they pointed out, did not take into account the evidence suggesting that female and male offenders differ in important risk factors. They further point out that over reliance on any type of actuarial instrument can lead to errors in the risk assessment process and can result in inappropriate treatment or poor response to interventions aimed at preventing, among several areas of concern in corrections, recidivism (Brennan, 2007).

Given the inherent shortcomings of the currently available recidivism risk assessment instruments such as the LSI-OR when used with female offenders as well as the lack of research

aimed at female offenders in all areas of risk, few options exist. As a result, there exists a large gap in the literature regarding alternative instruments that may be used to identify female offenders who are at risk for recidivism. The Personality Assessment Inventory (PAI, Morey, 1991) Aggression subscale has been investigated on a preliminary basis as a predictor of female recidivism (Salekin, Rogers, Ustad, & Sewell, 1998). The Treatment Scales, in particular, measure several factors that have been found to contribute to female recidivism but have not been directly investigated as an alternative to currently used recidivism risk assessment tools. This study proposes to address this gap and investigate the PAI Treatment Consideration scales as an alternative to the instruments currently used in the penitentiary system with female offenders.

Research Questions and Hypotheses

This study proposes to answer the following question: After controlling for race, type of crime committed, and age upon release, is there a significant difference in scores on the Treatment Consideration scales on the PAI between female offenders who recidivate during the observation period and those who do not?

There is much general research backing the predictive validity of clinical instruments in determining the outcome of incarcerated individuals (Caperton, Edens, & Johnson,2004; Maruish, 1999;, Monahan, 1981;, Morey & Hopwood, 2006; Skopp, Edens, & Ruiz, 2007; Walters, 2003; Walters, Diamond, Magaletta, Geyers, & Duncan,2007; Walters & Duncan ,2005). Preliminary findings support the AGG scales of the PAI Treatment Consideration scales as an indicator of psychopathy in female offenders, risk of recidivism and institutional adjustment which has been linked to post-release outcome (Skopp, Edens, & Ruiz; Walters; Walters, Diamond, Magaletta, Geyers, & Duncan; Walters & Duncan).

In addition to this, the PAI Treatment Consideration scales in particular and the selected demographics were chosen as the indicators of recidivism for this study as they aligned with the

Gendered Pathways theory proposed by Daly, 1994, 2006). Daly asserted that women and men differ in the reasons they commit crimes, and that they experience life differently, occupy different social roles, have different expectations and face different challenges upon release. She believed that current criminological theory, which was developed based primarily on male offenders, and did not adequately inform sentencing and intervention of female offenders. Several studies further support these factors as influencing female recidivism (Coulson, Flacqua, Nutbrown, Giulekas, & Cudjoe, 1996; Daly 1994, 2006; Folsom & Atkinson, 2007; Walters, Duncan, & Geyer, 2003; Wang, Rogers, Giles, Diamond, Herrington-Wang, & Taylor, 1997).

To date, the Aggression scales remain the most well-researched of the PAI scales with incarcerated populations. Walters, Duncan, and Geyer, (2003) investigated the ability of the PAI to measure institutional misconduct in federal penitentiary inmates of both genders. They found the Aggression scale (AGG) to be a robust measure of institutional misconduct, hence also a good measure of increased risk of recidivism since these two factors have been linked. Salekin, Rogers, Ustad, and Sewell (1998) found that the same scale also identified psychopathy and predicted recidivism in female jail inmates. Caperton, Edens, & Johnson (2004) reported significant differences on AGG between inmates with and without general infractions. Rau (2002) found that female county jail inmates who scored above 70T on the AGG scale had significantly more disciplinary infractions than those who did not.

The AGG scale was been cross-validated with a number of other measures of anger and aggression in both general and incarcerated populations. Among the strongest of correlations (.83) was found between the PAI AGG scales and the NEO-Personality Inventory (NEO-PI, Costa & McCrae, 1985) Hostility facet. This was followed by the correlation of .75 between the PAI AGG scales the Trait Anger Scale of the State-Trait Anger Expression Inventory (STAXI, Spielberger, 1988).

The SUI scale is significant in the correctional area as levels of depression and hopelessness about the future that an individual is feeling have been linked to recidivism, making this scale a promising measure of these risk factors (Hersen, Hilsenroth & Segal, 2004; Morey, 2003). Studies of the SUI scales among correctional populations have supported discriminant validity of these scales. Wang, Rogers, Giles, Diamond, Herrington-Wang and Taylor (1997) found elevated scores among a sample of male inmates who made subsequent suicide gestures as compared to a group of male inmates who had not received a suicide assessment during the observation period. Dunham (2000) found similar results. These results take on further relevance when the link between suicide attempts, ideations and recidivism are examined. Suicide attempts were found to be the strongest predictor of violent recidivism in female inmates in one study, while another study found that a history of self-injury correlated with recidivism (Blanchette, 1997).

Morey (2007) pointed out that, due to the objective nature of the STR and NON scales, few criterion group studies are available. Of the studies that have been conducted, a link was found between stressors that were serious enough to precipitate an adjustment reaction and elevations greater than 60T (Morey, 1991).

Correctional studies have supported both the validity of the STR scale as a measure of perceived current stressors as well as supported the link between stress and recidivism. Benda (2005) found that, in addition to depression and suicidality, a recent history of stress was linked to a woman's return to prison. As this could also include the individual's perception of events, interventions to improve ways of handling stress have supported the assumption that stress is an important factor in recidivism. Hunter & Hughes (1993) found that a 12-week course in Stress and Anger Management produced a significant decrease in violent crimes among male releasees and lengthened time in the community prior to reconviction.

The following research questions and hypotheses are proposed for this study:

Research question: After controlling for the specified demographics of age upon release, race, and type of crime, are the Treatment Consideration subscales significantly predictive of recidivism as assessed by a Cox proportional-hazards regression model as measured by time-to-event analysis?

Research hypothesis 1: The Treatment Consideration subscales are significantly predictive of the "recidivism-free survival" as assessed by a Cox proportional-hazards regression model as measured by time-to-event analysis after controlling for the specified demographics.

Null hypothesis 1: The Treatment Consideration subscales are not significantly predictive of the "recidivism-free survival" as assessed by a Cox proportional-hazards regression model as measured by time-to-event analysis after controlling for the specified demographics.

Research Question 2: Is the coefficient of the Aggression subscale using the proportional-hazards recidivism-free survival model significantly different from zero?

Research hypothesis 2: The coefficient of the Aggression subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero.

Null hypothesis 2: The coefficient of the Aggression subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero.

Research Question 3: Is the coefficient of the Suicide subscale using the proportional-hazards recidivism-free survival model significantly different from zero?

Research hypothesis 3: The coefficient of the Suicide subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero.

Null hypothesis 3: The coefficient of the Suicide subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero.

Research question 4: Is the coefficient of the Stress subscale using the proportional-hazards recidivism-free survival model significantly different from zero?

Research hypothesis 4: The coefficient of the Stress subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero.

Null hypothesis 4: The coefficient of the Stress subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero.

Research question 5: Is the coefficient of the Nonsupport subscale using the proportional-hazards recidivism-free survival model significantly different from zero?

Research hypothesis 5: The coefficient of the Nonsupport subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero.

Null hypothesis 5: The coefficient of the Nonsupport subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero.

Research Question 6: Is the coefficient of the Treatment Rejection subscale using the proportional-hazards recidivism-free survival model significantly different from zero?

Research hypothesis 6: The coefficient of the Treatment Rejection subscale using the proportional-hazards recidivism-free survival model will be significantly different from zero.

Null hypothesis 6: The coefficient of the Treatment Rejection subscale using the proportional-hazards recidivism-free survival model will not be significantly different from zero.

Project Method

Sample Size

This study utilizes a Cox proportional hazards model for data analysis. Cox-type regression models are the analysis of choice for recidivism studies over more traditional methods, such as a logistic regression, due to the fact that they handle cases in which the observed event does not occur. These cases are known as "censored" (Garson, 2009; Pezullo, 2009). Cox-type models also handle time varying independent variables and do not require the researcher to specify the shape of the hazard rate over time (Garson; Pezullo). For this reason, the Cox-type models are considered

full information methods as they use all available information. According to Garson, researchers such as Box-Steffensmeier and Jones, and Buckley and Westerland have noted that there are few instances in which a parametric duration model would be preferred over a Cox-type model for most social sciences applications.

In general, the more subjects studied, the more precisely the Cox regression coefficients can be estimated, the more reliable the resulting prognostic formulae will be, and the more statistical power will result with which to conclude that some PAI score is significantly associated with outcome. Formal sample-size calculations for a study of this type would require the specification effect sizes of importance for each of the PAI scores, along with estimates of the variability of these scores, and this information is not available to any degree of reliability (Pezzullo, personal communication, September 21, 2009). It should be noted that the power of this model is directly related to the number of events or hazards observed in the study rather than the number of individuals (Marchenko, 2007).

Following is a discussion of two approaches to estimating the sample size necessary to yield an adequate number of events. Each approach is based on the following: a) PAI data for this study is available on approximately 600 female offenders; b) studies have found that the mean length of the sentences for female offenders ranged from approximately 20.5 months to 36 months, and in turn suggest that approximately half of the 600 offenders would be released within the 36 month study period (Aborn, 2005; Bonszar, 2007; Washington State Sentencing Guideline Commission, 2005), and c) Brown (2007) reported a 30% recidivism for females offenders in Washington State who were in the low risk mixed offense, moderate risk mixed offense, and high risk drug categories such as those most likely to be released within the length of the study period of three years. Aborn and Bonszar found a recidivism rate of 57% in their study. For this current study, the lower rate will be used as it corresponds most closely to the population being studied, that is, lower risk offenders

with shorter sentences incarcerated in Washington State. This suggests that of the 300 possible releases, 100 would recidivate and as most recidivism occurs within the first few months of release, at least some of these would recidivate within the study period. The following section assumes the relationship between the estimated sample size and the effect size detected with 80% power at the .05 alpha level (that is, considering $p \leq 0.05$ to indicate statistical significance).

Pezullo (personal communication, September 21, 2009) offered the first method, based on more traditional statistical models, and on a 50% recidivism rate. When testing a numeric predictor, such as a PAI subscore, against recidivism by a Student t test, where about half of the subjects have recidivated during the follow-up interval, a total of about 300 subjects would provide 80% power if the difference in the mean score between re-arrested and non-rearrested subjects was 0.23 times as large as the within-group standard deviation (or, roughly, a "one-quarter-sigma effect size"). This is generally considered in the social sciences to be a "small" effect size (Cohen's conventions defines a 0.2-sigma effect size as "small"). Thus, this study would be very well powered, because it provides a good chance of detecting even fairly weak predictive ability in a PAI score (Pezzullo).

The second model was suggested by Peduzzi, Concato, Feinstein, & Holford (1995) and is based on the simple formula: 10 * k/p, where k represents the number of predictors and p represents the anticipated rate of failure. In this study, there are 8 predictors (3 variables to be controlled for and 5 PAI scales) and the anticipated failure rate is around 30 %, yielding the following: 10 * 8/.30 = 267 total sample size, 30% of which would be expected to recidivate. This yields an estimated event occurrence of 80, that is, an estimated number of 80 recidivators, from this sample size of 267. This model is in close agreement with the second model. Therefore, these two models support an anticipated minimal hazard occurrence of 80 to 100 individuals and would provide adequate power for this analysis (Pezzullo, 2009).

Subject Inclusion/Exclusion Criteria

Data from offenders who were incarcerated in 2006 will be used for this study as it will provide the longest possible observation period. PAI protocols with validity scale standard scores of 70 or higher indicate an invalid profile and will be excluded as per the recommendations in the test manual.

Source of Subject Data

The PAI is routinely administered to female offenders at WCCW upon incarceration. The Treatment Scale scores from the PAI as well as selected demographics (age at release, ethnicity, type of crime committed) from WCCW offenders incarcerated during 2006 and released between 1/1/2006 and 12/31/2009 (the observation period) will be analyzed. No offenders will be recruited, contacted, identified, or compensated.

Procedures

Test protocols will be reviewed on site at WCCW in the location in which they are currently maintained. Demographics will be accessed through OMNI on a DOC computer at the same location to prevent the need to move identifiable data from the institution. After the PAI scores and demographics are recorded on a spreadsheet or database, all identifying information such as name and DOC number will be removed and data/subjects will be renumbered from 1 to approximately 300, depending on the number of individuals released during the observation period. The deidentified data will be analyzed offsite by the researcher.

Study Design

As described in the Methods section above, this study will utilize a Cox proportional hazards model. The independent variable is recidivism or more specifically, the length of time an offender remains "recidivism free". The dependent variables are the PAI Treatment scale standard scores. The literature suggests that certain factors may confound test results and will be controlled for by the statistical methods used.

There is much discussion and disagreement between the various disciplines that study criminal behavior as to the exact etiology of the behavior and associated risk factors. Three factors, type of crime, race and age, have been clearly linked to recidivism. Black women are overrepresented in the prison system as are property offenders. Crime rates and level of seriousness decrease as an individual ages.

This study will not involve withholding of information to participants.

Measurement and Data Production

PAI Treatment scale scores and associated demographics will be entered into the SPSS statistical program. Recidivism will be defined as any return to prison for a community custody violation or new offense during the observation period. Demographics and prison release/reentry data will be acquired from the OMNI program currently utilized and maintained by DOC.

The validity and reliability of the PAI in correctional settings has been previously discussed.

Data Analysis

Data will be analyzed using a Cox proportional hazards model. Resulting hazards quotients will be compared through a t-test to determine levels of significance between lengths of time remaining out of prison between subjects. The analysis is expected to reflect the relationship between the PAI Treatment scale scores and length of time an offender remains out of prison, after controlling for the specified demographics (age at release, type of crime, ethnicity).

Logistics

Once approval is received from both Washington State DOC and Walden University, a mutually agreeable period for data collection will be developed with WCCW staff, particularly Psychologist 4 Dahlbeck, who oversees the security of the PAI protocols. The total time of data collection at WCCW is anticipated to be one work week. Entering the deidentified data into SPSS will take an additional week. The completion of Chapters 4 and 5 of the final dissertation is

anticipated to take approximately 30 days. The target date for completion and approval of the dissertation is on or around November 26, 2010. A final report to DOC will be provided within 30 days after that.

Significance of the Proposed Project

Earlier research found a link between the PAI AGG scales, which are included in the PAI Treatment scales, and female offender recidivism and institutional misconduct. Further, the Treatment Scales have been found to measure several areas contained in the Gendered Pathways Theory. As the PAI is currently administered at WCCW, it is a cost-effective way to utilize an existing procedure to further enhance DOC's efforts to reduce recidivism. It is anticipated that the Treatment scales will allow DOC to more accurately identify both high and low need female offenders and provide appropriate programming and housing. Although the data analysis will be conducted using SPSS, websites are available that allow users to enter data and calculate a hazards ratio. Depending on the results of this study, DOC will be able to enter future or current PAI scores and demographics into a similar model and calculate a hazards ratio for female offenders and inform placement and programming.

FORM G (additional signature page)

Signature of All Investigator/Researchers:

N/A		
Investigator/Researcher (Please Type Name)	Signature	Date
N/A		
Investigator/Researcher (Please Type Name)	Signature	Date
N/A		
Investigator/Researcher (Please Type Name)	Signature	Date
N/A		
Investigator/Researcher (Please Type Name)	Signature	Date
N/A		
Investigator/Researcher (Please Type Name)	Signature	Date
N/A		
Investigator/Researcher (Please Type Name)	Signature	Date
N/A		
Investigator/Researcher (Please Type Name)	Signature	Date

FORM H

N/A

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

INFORMED CONSENT DEPARTMENT OF CORRECTIONSUMENTS

Use as many continuation pages as needed. Please number pages consecutively.

Consent Department of Corrections documents – Check all recruitment and consent Department of Corrections documents proposed for this research; indicate readability level using Flesch-Kincaid test in Microsoft Word or equivalent measure; attach copies of all consent Department of Corrections documents and all Department of Corrections documents to this form.

No documents will be needed for this study as data is archival and no direct contact will be made with offenders.

		Flesch-Kincaid Reading Level
☐	Consent Form(s)	_____
☐	Contact Letter(s)	_____
☐	Recruitment Script(s)	_____
☐	Telephone Script(s)	_____
☐	Advertisement(s)	_____
☐	Web Page(s)	_____
☐	Other: _____	_____

Non-English Speaking Subjects:

If subjects will be recruited from non-English speaking populations, describe your plans for communicating with potential subjects and for translating consent Department of Corrections documents into their native language:

ATTACHMENT H1

SAMPLE – CONSENT FORMAT

(Use simple direct language appropriate for the intended readers)

CONSENT FORM

TITLE OF RESEARCH PROJECT

Investigator/Researchers: (List names, academic/staff positions, university/agency affiliation, complete address and telephone numbers of Investigator/Researchers and co-Investigator/Researchers)

Investigator/Researcher's Statement:

PURPOSE AND BENEFITS

State that this is a research activity. Identify the sponsor of the study. Describe the purpose of the research and the questions the study is intended to answer. Describe the expected benefits to individual subjects and/or society.

PROCEDURES

Describe the procedures involved. Identify any procedures that are experimental. Describe the time involved for each procedure, the total amount of time involved, and the duration of the subjects involvement in the research. If a random assignment is involved, state that the subjects will be assigned by chance to one of a number of groups, and describe the differences between the groups. Identify where the study procedures will take place, and who will administer the procedures. As appropriate, list and/or describe the specimens to be taken and the names and doses of substances to be given. Describe questionnaires and interviews to be administered. Provide examples of the most personal and sensitive questions to be asked. State that the subjects may refuse to answer any question or item. Describe any medical, social service, or computerized records needed, and specify any plans to video or audio tape subjects.

RISKS, STRESS, AND DISCOMFORT

Describe the physical, psychological, social, and/or economic risks of the research in terms of type, probability, magnitude and duration. Include a description of possible stress, discomforts or the invasion of privacy that might result.

OTHER INFORMATION

If applicable, describe the alternative procedures and/or standard of care which might benefit the subject. State whether study data will be confidential (linked to identifiers) or anonymous (no links). Indicate who will have access to identifiable data and how long identifiable data will be retained until destroyed. Describe procedures for protecting confidentiality of study data. As appropriate, state that while study data will remain confidential, the law requires that information about suspected abuse of children or dependent adults must be reported. State that study participation is voluntary and that subjects may refuse to participate or may withdraw from the study at any time without penalty or loss of benefits to which they are otherwise entitled. Include a description of any payments subjects may receive for participation. Indicate any costs subjects may immediately or ultimately have to bear. If appropriate, explain whether any medical treatments are available if injury occurs, and if so, what they consist of and whether their cost will be borne by the researcher or the subject. Indicate that the subject may contact the Investigator/Researchers toll-free or by collect call if they have any questions about the research.

Nora Christine "Kris" Marks — 6/8/10

Signature of Investigator/Researcher — Date

FORM G

STATE OF WASHINGTON
DEPARTMENT CORRECTIONS

DESCRIPTION OF RISKS AND SAFEGUARDS
FOR SUBJECTS IN THIS RESEARCH PROJECT

Use as many continuation pages as needed. Please number pages consecutively.

Risks to Subjects: None are anticipated. No offenders will be contacted, archival data will be utilized from testing that is already routinely administered at WCCW, and therefore no additional procedures will be required. No individually identifiable data will be removed from the institution and only deidentified data will be included in the analysis and/or dissertation or any other associated document based on this data.

Subject Recruitment: N/A

Targeted Population: Female offenders remain a seriously understudied population. Research strongly suggests that females and males engage in criminal behavior for very different reasons, that current actuarial instruments may over- or underidentify female offenders and that the resulting placement and programming may not be effective.

The specific population for this study (female offenders who were incarcerated between 1/1/2006 and 12/31/2006 and who were subsequently released between 1/1/2006 and 12/31/2009 ("observation period") and either remained out of prison or returned during the observation period) was chosen to allow for the longest period of observation between incarceration and release.

Confidentiality: No risk is anticipated. All individually identifiable data will be removed from the data before it is removed from the institution. Individual identifiers will not be included in any documents written based upon this data.

Comments on Disclosure of Identified Record Information

All information will be deidentified before it is removed from the institution. The review of the test protocols will require staff supervision to access the protocols, but is anticipated to present no undue burden on ongoing departmental operations.

Nora Kristine "Kris" Marks — 6/18/10

Signature of Principal Investigator/Researcher — Date

Print or Type Name Nora Kristine "Kris" Marks

FORM I

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

WAIVER OF INFORMED CONSENT

Research Involving Records Only – No Contacts with Human Subjects:

☐ Waiver of consent for disclosure of state agency records

Information Supporting Request for Waiver:

FORM J

Approval Expiration Date _____

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

REVIEW OF ONGOING RESEARCH PROJECT(S) AND PROJECT COMPLETION

The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates

Principal Investigator/Researcher ~~Nora Kristine "Kris" Marks~~

Address: 803 Alvarado Terrace Walla Walla WA 99362

Telephone: ~~509/386-4751~~ FAX: ~~509/529-7809~~ Email: ~~marks@bmi.net~~

Investigator/Researchers must provide Department of Corrections documentation of completion of appropriate education and training in the protection of human subjects with their progress reports for continuing review.

1. **Status of Project:** Include major accomplishments, significant events or study findings, dissertation activities, etc. Use additional sheets as necessary.

   I have completed all coursework for my PhD in Clinical Psychology. My proposal has been approved by my committee and the URR. I have received a provisional approval letter from the IRB from Walden University (attached).

2. **Summarize Study Amendments during this past year:** Describe any revisions in the study design and/or study procedures, such as the number and/or size of study groups, changes in recruitment procedures, materials and/or consent forms, revisions to instruments, requests for additional data, etc. Use additional sheets as necessary.

   Inclusion of Gendered Pathways Theory in proposal. No other changes.

1. **Anticipated Completion Date for your project:**
   Data collection should take no more than 1 week. Completion of dissertation is anticipated to be on or before November 26, 2010.

INVESTIGATOR/RESEARCHER'S STATEMENT:

As Principal Investigator/Researcher, I acknowledge that I am responsible for reporting any emergent problems, serious adverse events or reactions, or proposed study modifications, and that no modifications will be put into effect without prior Research Review Committee approval. I affirm that this research is being conducted in compliance with all Departmental-approved procedures and requirements, and that this research will not proceed beyond the expiration date of study approval unless continuation approval is extended. I affirm that this progress report is an accurate and complete description of my research.

Nora Huelsis "Kris" Marks
Signature of Principal Investigator/Researcher

6/8/10
Date

Return entire packet to:

Teri Herold-Prayer, Co Chair
Department of Corrections Research Review Committee
P.O. Box 41113
Olympia, WA 98504-1127

All components of the research packet must be completed in full before consideration of a research application can move forward in the approval process.

Research Packet Check List:

- ☐ **Form A**
- ☐ **Form B**
- ☐ **Form C**
- ☐ **Form D (Include a copy of the IRB approval letter)**
- ☐ **Form E**
- ☐ **Form F**
- ☐ **Form G**
- ☐ **Form H**
- ☐ **Form I (Research involving records only)**
- ☐ **Form J (Status of ongoing research, request for continuation of ongoing research, revisions to ongoing research)**

Department of Corrections
WASHINGTON STATE

CONFIDENTIALITY CONTRACT

I, Nora Kristine "Kris" Marks, understand and agree that,
PRINT NAME

in the performance of my research project as a Principal Investigator/Researcher, I am obligated to treat any and all offender or employee records to which I have access or might have access, through whatever means, as confidential and privileged. Furthermore:

- I understand that disclosure of the identified information will only be approved if disclosure is compatible with state and federal laws and regulations.
- I understand that any violation of confidentiality of offender or employee records or information may result in termination of the research project and that action may be taken by a prosecuting attorney if the breach of confidentiality violates state laws and regulations.
- I agree that information requested in an identifiable form for use of a statistical or research activity will not be used to contact, in any way, any person identified in that information outside of the parameters of the project.

Signature: Nora Kristine "Kris" Marks Date: 6/8/10

Herold-Prayer, Teri A. (DOC)

From: Herold-Prayer, Teri A. (DOC)
Sent: Tuesday, August 17, 2010 7:13 AM
To: Marks, Nora K. (DOC)
Subject: RE: Final Data Request

I am a little confused. It was the understanding of the committee that you would not be removing anything from the institution. Why would you be scanning anything, it was not part of the approval process that you would be scanning any documents. Could you please clear this up for me? If you changed the protocol of the approved process we might have a problem.

Teri

From: Marks, Nora K. (DOC)
Sent: Monday, August 16, 2010 5:48 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: RE: Final Data Request

I scanned and scored last names A-part of S, which was the largest part of the test protocols. The scanner malfunctioned before I could get through S-T. My chair wants me to try to return to WCCW and get the remaining scores when the scanner is working. Dr. Dahlbeck thinks it could be several weeks before it is working again. There are about 250 names S-Z, of those, I'm estimating 100 were assessed. It would take me no more than one day to complete.

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Herold-Prayer, Teri A. (DOC)
Sent: Monday, August 16, 2010 11:34 AM
To: Marks, Nora K. (DOC)
Subject: Final Data Request

<< File: Nora Marks PAI ResearchW_Catagories final 8.16.2010.xlsx >>

Here is your data with all of the additional information and de-identified.

From: Marks, Nora K. (DOC)
Sent: Friday, August 13, 2010 5:15 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: 737755

FORM I

STATE OF WASHINGTON
DEPARTMENT OF CORRECTIONS

WAIVER OF INFORMED CONSENT

Research Involving Records Only – No Contacts with Human Subjects:

x Waiver of consent for disclosure of state agency records

Information Supporting Request for Waiver:

Two types of information will be reviewed for this study: a)Treatment and Validity Scales scores from inmates who were admitted to WCCW during the calendar year 2006 and then subsequently released between 1/1/2006 and 12/31/2009 and b)date of release, age at release, type of crime, ethnicity and if applicable, date of readmission to prison.

DOC will pull the names and DOC #'s of the inmates who meet the above criteria (eg: admitted to WCCW during 2006 and released any time between 2006 and 2009 and provide those to me.

I will match those DOC #'s/names to the inmates who were administered the PAI during 2006.

I will record the inmates' Treatment scale and validity scores from the hard copies of the PAI test protocols. I will do this at WCCW in the location in which these test protocols are currently stored or as instructed by the individual in charge of maintaining the security of these records (ie: Dr. Ron Dahlbeck). I will not remove any test protocols from WCCW.

I will then return that list of inmates to DOC (those admitted during 2006, administered the PAI, and released between 2006 and 2009) and all of the other names and DOC #'s not being used will be destroyed (ie: admitted to WCCW during 2006 but refused testing or were not tested for some reason).

DOC will use that list and provide the inmates' ethnicity, age at release, type of crime (violent/nonviolent), date of release and if applicable, date of readmission for any reason. In the event age at release is not available, birth date may be provided and I will calculate the age at release.

DOC will de-identify the data before sending it back to me for research evaluation.

The records received will be maintained in a locked cabinet in the researcher's home or office for 10 years or will be maintained/destroyed as required by DOC.

TORI

RESEARCH COMMITTEE REVIEW FORM

Print Form

Proposal Title:	Ilvis Marks -
Reviewer Name:	TORI
Rating Definitions (check one for each area of review):	**1** = Unacceptable; **2** = Acceptable with major revision; **3** = Acceptable with some revision; **4** = Acceptable with minor revision; **5** = Acceptable; n/a = Not applicable to this proposal; n/r = Not applicable to this reviewer
Project Summary:	P.A.I. Scores Treatment as a predictor for Recividism
Study Relevance	1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ n/a ☐ n/r ☐

Rate the importance of the study to the DOC in terms of relevance to our population, agency priorities and statutory requirements. Consider also the relevance to the study of criminal justice / corrections or practice. Justify your rating in the comments section below.

Comments	This can certainly benefit the future study of incarcerated women.
Study Design	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the overall quality of the proposed research deign. Consider whether the sampling strategy, target population, request data on a population that is appropriate to the purpose of the study, displays a knowledge of DOC data elements and accounts for data not collected by DOC, etc. Justify your rating in the comments section below. Also consider whether the researcher has provided adequate justification for the study topic.

Comments	She has a very good understanding of personality assessments and its importance to female inmate research
Data Analysis	1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ n/a ☐ n/r ☐

Rate the adequacy of the proposed analysis to provide results for the study question. Consider whether the researcher has suggested analysis methods appropriate to the data requested/collected, consider whether the researcher has suggested adequate statistical methods, consider whether the analysis proposed is appropriate to the study design. Justify your rating in the comments section below.

Comments	While her approach is acceptable I wonder why she is not comparing her subset to inmates who didn't have P.A.I.
Data Collection Instrument	1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ n/a ☐ n/r ☐

Rate quality of the data collection instrument. Consider whether the instrument is appropriately worded for the population, is adequate to collect the data described and if the instrument has been field tested. Justify your rating in the comments section below.

Comments	Not sure about field tested, but the data does apply to the population
Institutional Disruption	1 ☐ 2 ☐ 3 ☒ 4 ☐ 5 ☐ n/a ☐ n/r ☐

Rate the overall level of institutional disruption that is likely to result from this study. Consider the time to collect the data, operational issues in providing subjects to the research, resources required by the institution to provide necessary safety for offenders and researchers. Justify your rating in the comments section below.

Comments	Data is stored in a secure location at the prison and she won't need supervision.
Other comments/ concerns	Score = 20 I Approve

Laptop will need to be screened by DOC.
Laptop Security - Password protect file
NO AIR CARD

MIKE EVANS

RESEARCH COMMITTEE REVIEW FORM

Print Form

Proposal Title:	
Reviewer Name:	
Rating Definitions (check one for each area of review):	**1** = Unacceptable; **2** = Acceptable with major revision; **3** = Acceptable with some revision; **4** = Acceptable with minor revision; **5** = Acceptable; n/a = Not applicable to this proposal; n/r = Not applicable to this reviewer
Project Summary:	Relationship between recidivism and scores on the PAI treatment scales of female offenders.
Study Relevance	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the importance of the study to the DOC in terms of relevance to our population, agency priorities and statutory requirements. Consider also the relevance to the study of criminal justice / corrections or practice. Justify your rating in the comments section below.

Comments	
Study Design	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the overall quality of the proposed research deign. Consider whether the sampling strategy, target population, request data on a population that is appropriate to the purpose of the study, displays a knowledge of DOC data elements and accounts for data not collected by DOC, etc. Justify your rating in the comments section below. Also consider whether the researcher has provided adequate justification for the study topic.

Comments	
Data Analysis	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the adequacy of the proposed analysis to provide results for the study question. Consider whether the researcher has suggested analysis methods appropriate to the data requested/collected, consider whether the researcher has suggested adequate statistical methods, consider whether the analysis proposed is appropriate to the study design. Justify your rating in the comments section below.

Comments	
Data Collection Instrument	1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ n/a ☐ n/r ☐

Rate quality of the data collection instrument. Consider whether the instrument is appropriately worded for the population, is adequate to collect the data described and if the instrument has been field tested. Justify your rating in the comments section below.

Comments	
Institutional Disruption	1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ n/a ☐ n/r ☐

Rate the overall level of institutional disruption that is likely to result from this study. Consider the time to collect the data, operational issues in providing subjects to the research, resources required by the institution to provide necessary safety for offenders and researchers. Justify your rating in the comments section below.

Comments	
Other comments/ concerns	PAI conf. data / Needs to maintain Comp. Security covered under DOC policy since she is DOC employee

RESEARCH COMMITTEE REVIEW FORM

Print Form

Proposal Title:	The PAI + tx Scales as a Predictor of Recidivism?
Reviewer Name:	Carrie Pettigrew Wisler
Rating Definitions (check one for each area of review):	**1** = Unacceptable **2** = Acceptable with major revision **3** = Acceptable with some revision **4** = Acceptable with minor revision **5** = Acceptable n/a = Not applicable to this proposal n/r = Not applicable to this reviewer
Project Summary:	
Study Relevance	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the importance of the study to the DOC in terms of relevance to our population, agency priorities and statutory requirements. Consider also the relevance to the study of criminal justice / corrections or practice. Justify your rating in the comments section below.

Comments	
Study Design	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the overall quality of the proposed research deign. Consider whether the sampling strategy, target population, request data on a population that is appropriate to the purpose of the study, displays a knowledge of DOC data elements and accounts for data not collected by DOC, etc. Justify your rating in the comments section below. Also consider whether the researcher has provided adequate justification for the study topic.

Comments	
Data Analysis	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the adequacy of the proposed analysis to provide results for the study question. Consider whether the researcher has suggested analysis methods appropriate to the data requested/collected, consider whether the researcher has suggested adequate statistical methods, consider whether the analysis proposed is appropriate to the study design. Justify your rating in the comments section below.

Comments	
Data Collection Instrument	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate quality of the data collection instrument. Consider whether the instrument is appropriately worded for the population, is adequate to collect the data described and if the instrument has been field tested. Justify your rating in the comments section below.

Comments	
Institutional Disruption	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the overall level of institutional disruption that is likely to result from this study. Consider the time to collect the data, operational issues in providing subjects to the research, resources required by the institution to provide necessary safety for offenders and researchers. Justify your rating in the comments section below.

Comments	Ok -

Other comments/ concerns	

Submit by Email

Thomas Saltrup

RESEARCH COMMITTEE REVIEW FORM

Print Form

Proposal Title:	PAI - indicators - r ĉ recidivism
Reviewer Name:	S
Rating Definitions (check one for each area of review):	1 = Unacceptable; 2 = Acceptable with major revision; 3 = Acceptable with some revision; 4 = Acceptable with minor revision; 5 = Acceptable; n/a = Not applicable to this proposal; n/r = Not applicable to this reviewer
Project Summary:	
Study Relevance	1 ☐ 2 ☐ 3 ☐ 4 ☐ (5) ☐ n/a ☐ n/r ☐

Rate the importance of the study to the DOC in terms of relevance to our population, agency priorities and statutory requirements. Consider also the relevance to the study of criminal justice / corrections or practice. Justify your rating in the comments section below.

Comments	
Study Design	1 ☐ 2 ☐ 3 ☐ (4) ☐ 5 ☐ n/a ☐ n/r ☐

Rate the overall quality of the proposed research deign. Consider whether the sampling strategy, target population, request data on a population that is appropriate to the purpose of the study, displays a knowledge of DOC data elements and accounts for data not collected by DOC, etc. Justify your rating in the comments section below. Also consider whether the researcher has provided adequate justification for the study topic.

Comments	
Data Analysis	1 ☐ 2 ☐ 3 ☐ 4 ☐ (5) ☐ n/a ☐ n/r ☐

Rate the adequacy of the proposed analysis to provide results for the study question. Consider whether the researcher has suggested analysis methods appropriate to the data requested/collected, consider whether the researcher has suggested adequate statistical methods, consider whether the analysis proposed is appropriate to the study design. Justify your rating in the comments section below.

Comments	
Data Collection Instrument	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ (n/a) ☐ n/r ☐

Rate quality of the data collection instrument. Consider whether the instrument is appropriately worded for the population, is adequate to collect the data described and if the instrument has been field tested. Justify your rating in the comments section below.

Comments	
Institutional Disruption	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ n/a ☐ n/r ☐

Rate the overall level of institutional disruption that is likely to result from this study. Consider the time to collect the data, operational issues in providing subjects to the research, resources required by the institution to provide necessary safety for offenders and researchers. Justify your rating in the comments section below.

Comments	Minimal impact on offenders

Other comments/ concerns	

Peter

RESEARCH COMMITTEE REVIEW FORM

Print Form

Proposal Title:	PAI Predict Recidivism
Reviewer Name:	
Rating Definitions (check one for each area of review):	1 = Unacceptable; 2 = Acceptable with major revision; 3 = Acceptable with some revision; 4 = Acceptable with minor revision; 5 = Acceptable; n/a = Not applicable to this proposal; n/r = Not applicable to this reviewer
Project Summary:	Can Treatment Scales in the PAI Predict Recidivism
Study Relevance	1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ n/a ☐ n/r ☐

Rate the importance of the study to the DOC in terms of relevance to our population, agency priorities and statutory requirements. Consider also the relevance to the study of criminal justice / corrections or practice. Justify your rating in the comments section below.

Comments	Need to specify definition of recidivism and what data researcher actually needs.
Study Design	1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ n/a ☐ n/r ☐

Rate the overall quality of the proposed research deign. Consider whether the sampling strategy, target population, request data on a population that is appropriate to the purpose of the study, displays a knowledge of DOC data elements and accounts for data not collected by DOC, etc. Justify your rating in the comments section below. Also consider whether the researcher has provided adequate justification for the study topic.

Comments	Again. Just more clarification on target population, dates, and recidivism measures.
Data Analysis	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the adequacy of the proposed analysis to provide results for the study question. Consider whether the researcher has suggested analysis methods appropriate to the data requested/collected, consider whether the researcher has suggested adequate statistical methods, consider whether the analysis proposed is appropriate to the study design. Justify your rating in the comments section below.

Comments	Omni may not be necessary. P!R can provide docnums for target pop – Res. can get PAI scores – P!R can add demo. ! new identifier
Data Collection Instrument	1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ n/a ☐ n/r ☐

Rate quality of the data collection instrument. Consider whether the instrument is appropriately worded for the population, is adequate to collect the data described and if the instrument has been field tested. Justify your rating in the comments section below.

Comments	Seems minimal
Institutional Disruption	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ n/a ☐ n/r ☐

Rate the overall level of institutional disruption that is likely to result from this study. Consider the time to collect the data, operational issues in providing subjects to the research, resources required by the institution to provide necessary safety for offenders and researchers. Justify your rating in the comments section below.

Comments	

Other comments/ concerns	

Carlyne Kujath

RESEARCH COMMITTEE REVIEW FORM

Print Form

Proposal Title:	Kris Markey : PAI & Recidivism
Reviewer Name:	
Rating Definitions (check one for each area of review):	**1** = Unacceptable **2** = Acceptable with major revision **3** = Acceptable with some revision **4** = Acceptable with minor revision **5** = Acceptable n/a = Not applicable to this proposal n/r = Not applicable to this reviewer
Project Summary:	~~See~~ determine correlation btw recidivism & PAI
Study Relevance	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ n/a ☐ n/r ☐

Rate the importance of the study to the DOC in terms of relevance to our population, agency priorities and statutory requirements. Consider also the relevance to the study of criminal justice / corrections or practice. Justify your rating in the comments section below.

Comments	Sounds like this could inform policy sample? - random?
Study Design	1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ n/a ☐ n/r ☐

Rate the overall quality of the proposed research deign. Consider whether the sampling strategy, target population, request data on a population that is appropriate to the purpose of the study, displays a knowledge of DOC data elements and accounts for data not collected by DOC, etc. Justify your rating in the comments section below. Also consider whether the researcher has provided adequate justification for the study topic.

Comments	Proportional hazards survival strong compared to others. what about those who do not recidivate? long
Data Analysis	1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ n/a ☐ n/r ☐

Rate the adequacy of the proposed analysis to provide results for the study question. Consider whether the researcher has suggested analysis methods appropriate to the data requested/collected, consider whether the researcher has suggested adequate statistical methods, consider whether the analysis proposed is appropriate to the study design. Justify your rating in the comments section below.

Comments	
Data Collection Instrument	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ n/a ☑ n/r ☐

Rate quality of the data collection instrument. Consider whether the instrument is appropriately worded for the population, is adequate to collect the data described and if the instrument has been field tested. Justify your rating in the comments section below.

Comments	Sounds like secondary analysis - then using data that's already been collected
Institutional Disruption	1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ n/a ☐ n/r ☐

Rate the overall level of institutional disruption that is likely to result from this study. Consider the time to collect the data, operational issues in providing subjects to the research, resources required by the institution to provide necessary safety for offenders and researchers. Justify your rating in the comments section below.

Comments	

Other comments/ concerns	

Herold-Prayer, Teri A. (DOC)

From: Herold-Prayer, Teri A. (DOC)
Sent: Tuesday, June 22, 2010 7:37 AM
To: Marks, Nora K. (DOC)
Subject: RE: Still waiting for Walden IRB

I will be moving forward with the committee review process and after that process I can better inform you of how to move forward with Walden.

From: Marks, Nora K. (DOC)
Sent: Monday, June 21, 2010 5:27 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: Still waiting for Walden IRB

I tried to contact them today, no luck. I sent a more detailed email telling her what you need. If you folks give me conditional approval, they might accept that and move forward. I explained that you were not an IRB and hopefully that will answer some questions.

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

Herold-Prayer, Teri A. (DOC)

From: Marks, Nora K. (DOC)
Sent: Tuesday, June 22, 2010 1:18 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: RE: Still waiting for Walden IRB

Thanks. I talked to Jenny Shearer by phone today. My IRB application is "100 % approved", but they call it "conditionally approved because they won't let me collect data until you folks say it is okay. She can send a copy of the "conditional approval form", signed, if you need it. The "data use agreement" in it is a generic term and doesn't mean anything in specific. If you approve my application, that application is the "data use agreement". Upon your approval, it will take 2-3 days for Walden to send me permission to collect data.

Hope this helps!

Kris

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Herold-Prayer, Teri A. (DOC)
Sent: Tuesday, June 22, 2010 7:37 AM
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Subject: RE: Still waiting for Walden IRB

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Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F

Herold-Prayer, Teri A. (DOC)

From: Herold-Prayer, Teri A. (DOC)
Sent: Wednesday, June 16, 2010 10:55 AM
To: Marks, Nora K. (DOC)
Subject: RE: Reply from Walden

Nora,

Concerning the signed IRB form:

I really don't know how to respond other than to tell you that there are no two IRB boards that operate the same, hence, why we leave it up to the board to decide who has signature authority. I would assume that whoever signs your official IRB letter would be the same person who would sign our authorization form. We need a signature from a board member who is authorized to sign on behalf of the IRB board for approved research. A copy of your IRB approval letter would also be acceptable.

Concerning the data use agreement, like I said earlier, we typically do not have data sharing (use) agreements for research projects of this nature. Form "I" in the application is all that WA DOC requires when a request is made for data only and our review committee will either approve or disapprove the research based on the methodology, research plausibility, etc.

The WA DOC review committee is not an IRB Board and can only approve research that has been approved by the requesting agency, department, or institution of higher education. This tells us that the board has found that the research meets all standards set forth for prisoner research according the 45 CFR 46; subpart C.

I am in the process of scheduling the research committee based on your conditional IRB approval. After the committee meets I will have a better idea of how this project will proceed. If the project is to move forward it would be conditional on either a copy of a signed IRB letter from Walden or the form provided in the application needs to be signed. The conditional IRB will not be acceptable since it is not a signed document (deeming it official).

I am not sure if this helps any, but, it is the best I can do. Feel free to share this email with Walden if you feel it would help to clear things up with them.

Teri Herold-Prayer
Washington DOC Research Manager

From: Marks, Nora K. (DOC)
Sent: Tuesday, June 15, 2010 1:21 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: Reply from Walden

Terry, perhaps you can help with this:

Hi Kris,

The form you sent does not specify who is expected to sign this form. It merely states Approval by Institutions or Organizations **with** an Accredited Human Subjects Review Board. You need to identify who is expected to sign this form. Is it the IRB Chair? the IRB member who conducted the review? the institutional official? your program director? etc.

Also, in regards to your approval letter, you have not submitted documentation from the prison that they require new terminology. An e-mail was sent to you on 6/11, explaining that the term data use agreement is meant to be generic and

that whatever documentation they provide to you is what will constitute the agreement under which their data will be provided to you. The IRB is willing to work with the prison, but needs written documentation of what they require.

I realize this is a lot of work on your end, but you need to get everything organized before anything else can be provided. With multiple, ambiguous requests, the chance that a form is not filled out properly increases, thus creating more hoops that will need to be jumped through for the prison. Thus, the next time you e-mail Walden IRB, send one e-mail which provides any document that needs to signed by a Walden representative with information as to who is authorized to sign the form. If a new conditional letter needs to be drafted, you will need to provide the written request, with acceptable terminology to be used, for this from the prison as part of that e-mail as well

Sincerely,
Jenny Sherer, M.Ed.
Operations Manager
Office of Research Integrity and Compliance
irb@waldenu.edu
Tollfree : 800-925-3368 ext. 1341
Fax: 626-605-0472
Office address for Walden University:
155 5th Avenue South, Suite 100
Minneapolis, MN 55401

Thanks,
Kris

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

Herold-Prayer, Teri A. (DOC)

From: Marks, Nora K. (DOC)
Sent: Friday, June 11, 2010 1:09 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: RE: Application

Thanks. Still waiting for news from Walden to see if you app will suffice for a data use agreement. If so, they can give me provisional approval that will turn into real approval if the project is approved by your committee. This has been an interesting experience in negotiation!

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Herold-Prayer, Teri A. (DOC)
Sent: Friday, June 11, 2010 12:59 PM
To: Marks, Nora K. (DOC)
Subject: RE: Application

No need to email him, I will address this at the review committee meeting.

From: Marks, Nora K. (DOC)
Sent: Friday, June 11, 2010 12:58 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: RE: Application

I won't need access to a computer if you are pulling the demographic information for me. Should I email him with this?

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Herold-Prayer, Teri A. (DOC)
Sent: Friday, June 11, 2010 7:27 AM
To: Marks, Nora K. (DOC)
Subject: Application

Hi Nora,

I might have mentioned that we are making changes to the application process and one of those changes will be the elimination of Form E2 – Douglas Cole has already been informed that he doesn't have to sign the form. He has also informed us that he is concerned that access to a DOC computer will be a problem in case you were hoping to have access to one while visiting WCCW.

Teri Herold-Prayer

Herold-Prayer, Teri A. (DOC)

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Sent: Friday, June 11, 2010 12:58 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: RE: Application

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Sent: Friday, June 11, 2010 7:27 AM
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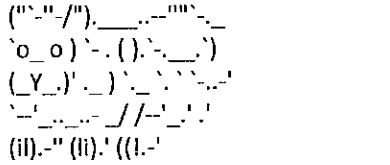
Teri Herold-Prayer
Research Manager
Washington Department of Corrections
7345 Linderson Way SW
Tumwater, WA 98501
Mail: DOC. P.O. Box 41113. Olympia, Wa 98504
Phone: 360.725.8265
Fax: 360.586.0613
taheroldprayer@doc1.wa.gov



Go Cougs!

Herold-Prayer, Teri A. (DOC)

From: Marks, Nora K. (DOC)
Sent: Wednesday, June 09, 2010 4:02 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: RE: Data use agreement Marks

Teri: So, when the time comes, what I'll need are the DOC numbers of the offenders who were admitted to WCCW between 1/1/2006 and 12/31/2006 (This is because they are given the PAI upon admission to prison)and then were then released between 1/1/2006 and 12/31/2009. I can then get their PAI scores and will need the following demographics:

Age at release (To control for the aging out of crime phenomena)
Ethnicity (More Black females than other ethnic groups)
Type of Crime (Property offenders reoffend more)

Your pulling the demographics for me will save me, literally, days of data collection. This is extremely good news.

Kris
Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Herold-Prayer, Teri A. (DOC)
Sent: Wednesday, June 09, 2010 2:39 PM
To: Marks, Nora K. (DOC)
Subject: RE: Data use agreement Marks

<< File: kris Marks 2.docx >>
Hi Kris,

You will see the total number of female releases for 2006 (**1148**) in the above attached file. What I suggest that you do is take the list of DOC numbers that we can provide you and identify those who have a PAI – give us back the list of offenders with PAI scores and we can pull the demographics for those particular offenders.

Teri

From: Marks, Nora K. (DOC)
Sent: Tuesday, June 08, 2010 3:27 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: FW: Data use agreement Marks

Teri: I apologize, I reread the Level II requirements and mine will follow under Level II status. I'll work on the form and return it tomorrow.

Thanks,
Kris

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Marks, Nora K. (DOC)
Sent: Tuesday, June 08, 2010 3:14 PM
To: Herold-Prayer, Teri A. (DOC)
Cc: Dahlbeck, Ronald C. (DOC); Walls, Michael T. (DOC)
Subject: RE: Data use agreement Marks

Teri: I thought I had covered all the bases with DOC prior to my attempting this study, but apparently not, because as I read your Approval of a Research Project application, I notice that both of the research levels on the application prohibit contact with individually identifiable records. My proposal involves looking at PAI test results on female offenders who were incarcerated and administered the PAI during 2006 and will record the Treatment Scale and Validity Scale scores. The PAI is routinely administered by WCCW staff and so would not involve any direct contact with offenders or any additional testing. The problem is that I cannot gather the PAI data without looking at the test protocols because it isn't recorded any other way, and I need access to the OMNI system to gather the associated demographics on the inmate. I will need associated demographics of 1)released or released and reincarcerated between 2006 and 2009; 2) age at release, 3)ethnicity, 4)violent or nonviolent crime. Age at release, ethnicity and types of crime are potentially confounding factors and need to be controlled for in the statistical analysis.

I am planning to collect the data on site at WCCW and to deidentify the data before I leave the institution by renumbering it from 1-300 (depending on the sample size) and, of course, including no DOC numbers, names, initials, birthdates, etc. Again, there will be no individually identifiable data in my study or leaving the institution and preferably not even leaving the office in which the protocols are kept.

I was under the impression this data would be considered archival data, so this is an unexpected development for me.

Any suggestions would be appreciated.

Kris

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Herold-Prayer, Teri A. (DOC)

Sent: Tuesday, June 08, 2010 2:42 PM
To: Marks, Nora K. (DOC)
Subject: RE: Data use agreement Marks

Hi Nora,

I am the Research Manager for DOC and we have a research review process that needs to be done before research can begin at any of our facilities or access to data. I have attached the DOC Research policy and the Research Application. Once the application is received it will need to be considered by a review committee and recommendations will be made at that time. This process can take up to 30-days depending on the committee's calendars. I cannot sign the data agreement until the committee reviews and decides on your research project.

Please don't hesitate to call/email if you have questions.

Teri Herold-Prayer

<< File: 2010 Research Review Application rev 04-23-10 copy.docx >> << File: DOC 260.050 Research Review and Use.pdf >>

From: Marks, Nora K. (DOC)
Sent: Tuesday, June 08, 2010 1:53 PM
To: Herold-Prayer, Teri A. (DOC); Evans, Michael A. (DOC)
Cc: Dahlbeck, Ronald C. (DOC); Walls, Michael T. (DOC)
Subject: Data use agreement Marks

Attached is copy of a Data Use Agreement. I need it signed before I can get approval from Walden for my research. I have attached a conditional approval from Walden as well, in case that is needed. After Walden approves this, then I will send you their IRB approval and my WA state IRB application.

I am also attaching a copy of my prospectus in case you have need to review it as well. It was approved by my committee and Walden's URR on 5/23/2010.

Please feel free to contact me if you have any further questions.

Kris

<< File: E-mail Conditional IRB approval-Nora Marks.htm >> << File: NKMarks_Data_Use_Agreement.docx >>

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

<< File: Marks_Proposal_Post_URR.docx >>

FEMALE

MONTH	TOTAL	TYPE OF RELEASE					
		DISCHARGE	REL TO COM CUST	REL TO PRS	PAROLED	OTHER	VIOL REL
TOTAL	3537	302	841	2	2	1	2389
JULY	308	28	71	.	.	.	209
AUGUST	311	26	74	.	.	.	211
SEPTEMBER	267	27	58	.	.	.	182
OCTOBER	289	29	65	.	.	.	195
NOVEMBER	262	22	76	.	.	.	164
DECEMBER	287	20	70	1	.	.	196
JANUARY	300	29	78	.	1	1	191
FEBRUARY	278	15	82	.	.	.	181
MARCH	281	17	66	1	1	.	196
APRIL	304	26	60	.	.	.	218
MAY	363	39	90	.	.	.	234
JUNE	287	24	51	.	.	.	212

Reply Reply All Forward Delete
Move Add to Task Calendar Block List
Printable Format Toggle Headers Close

Message-ID :	<OF8947A301.C463F7C1-ON8625773C.006C9325-8625773C.006C898C@email.waldenu.edu>
Subject :	Conditional IRB approval-Nora Marks
From :	IRB@waldenu.edu
Return-Path :	<Jenny.Sherer@waldenu.edu>
Cc :	research@waldenu.edu, matthew.geyer@waldenu.edu
Received :	from CA-Gateway02.laureate-inc.com (ca-gateway02.laureate-inc.com [192.65.141.130]) by c2mail3.campuscruiser.com (8.13.8/8.13.1/TCC) with ESMTP id o58JjWQ5018964 for <nora.marks@waldenu.edu>; Tue, 8 Jun 2010 15:45:33 -0400 from wums01.waldenu.edu ([10.252.4.101]) by CA-Gateway02.laureate-inc.com (Lotus Domino Release 6.5.5FP1) with ESMTP id 2010060812453119-178709 ; Tue, 8 Jun 2010 12:45:31 -0700
MIME-Version :	1.0
Date :	Tue, 8 Jun 2010 14:45:54 -0500
Sender :	Jenny.Sherer@waldenu.edu
Content-Type :	multipart/alternative; boundary="=_alternative 006C898A8625773C_="
To :	nora.marks@waldenu.edu

Subject : **Conditional IRB approval-Nora Marks**

Date :	Tue, Jun 08, 2010 02:45 PM CDT
From :	**http://my.campuscruiser.com/em2PageServlet?pg=wreadmail&tg=BaseReadmail&cx=22.295-1.100021195&msgId=1068769398#**
To :	
Reply To :	javascript:quickAddSwitch('IRB@waldenu.edu');
CC :	research@waldenu.edu, matthew.geyer@waldenu.edu

Dear Ms. Marks,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "The Personality Assessment Inventory Treatment Scales as a Predictor of Recidivism in Female State Penitentiary Inmates," conditional upon the approval of community research partner, as documented in a signed data use agreement. Walden's IRB approval only goes into effect once the Walden IRB confirms receipt of that data use agreement.

Your approval # is 06-08-10-0327780. You will need to reference this number in your dissertation and in any future funding or publication submissions.

Your IRB approval expires on June 7, 2011. One month before this expiration date, you will be sent a Continuing

Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application materials that have been submitted as of this date. If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive an IRB approval status update within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you a made commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden web site or by emailing irb@waldenu.edu:
http://inside.waldenu.edu/c/Student_Faculty/StudentFaculty_4274.htm

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Please note that this letter indicates that the IRB has approved your research. You may not begin the research phase of your dissertation, however, until you have received the **Notification of Approval to Conduct Research** (which indicates that your committee and Program Chair have also approved your research proposal). Once you have received this notification by email, you may begin your data collection.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKImdiQ_3d_3d

Sincerely,
Jenny Sherer, M.Ed.
Operations Manager
Office of Research Integrity and Compliance
Email: irb@waldenu.edu
Fax: 626-605-0472
Tollfree : 800-925-3368 ext. 1341
Office address for Walden University:
155 5th Avenue South, Suite 100
Minneapolis, MN 55401

DATA USE AGREEMENT

This Data Use Agreement ("Agreement"), effective as of ("Effective Date"), is entered into by and between Nora Kristine Marks("Data Recipient") and Washington State Department of Corrections ("Data Provider"). The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set ("LDS") for use in research in accord with the HIPAA and FERPA Regulations.

1. Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the "HIPAA Regulations" codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.

2. Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient a LDS in accord with any applicable HIPAA or FERPA Regulations

3. Data Fields in the LDS. In preparing the LDS, Data Provider shall include the **data fields specified as follows,** which are the minimum necessary to accomplish the research (list all data to be provided):

   --Personality Assessment Inventory (PAI) test protocols from female offenders who were incarcerated at the Washington Correctional Center for Women (WCCW) during 2006 and who were administered the instrument. The Treatment Scaled Standard scores and Validity Scaled scores will be recorded. The test protocols will remain in the secure site at WCCW in which they are currently stored. They will not be removed from WCCW.

   --Access to the OMNI database to gather selected demographics on the offenders who were administered the PAI as referenced above and who were released from prison during the observation period (1/1/2006 to 12/31/2010). The demographics of recidivating (returning) and nonrecidivating offenders will be recorded. Demographic data will include: age at release from prison, ethnicity, type of crime (violent or nonviolent).

   Prior to the data leaving WCCW, the name and DOC numbers of the offenders will be removed and replaced with a number from 1 to approximately 300, depending on the size of the sample. No individual identifiers will be retained with the data and all individual identifiers will be removed prior to the data leaving WCCW.

4. Responsibilities of Data Recipient. Data Recipient agrees to:

   a. Use or disclose the LDS only as permitted by this Agreement or as required by law;

b. Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

c. Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

d. Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

e. Not use the information in the LDS to identify or contact the individuals who are data subjects.

5. Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS for its Research activities only.

6. Term and Termination.

a. Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

b. Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

c. Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

d. For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

e. Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

7. Miscellaneous.

a. Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable

amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

b. Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

c. No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

d. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

e. Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER	**DATA RECIPIENT**
Signed: _____	Signed: Nora Kristine Marks
Print Name: _____	Print Name: Nora Kristine Marks
Print Title: _____	Print Title: Data Recipient/Investigator

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Herold-Prayer, Teri A. (DOC)
Sent: Tuesday, June 08, 2010 2:42 PM
To: Marks, Nora K. (DOC)
Subject: RE: Data use agreement Marks

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<< File: 2010 Research Review Application rev 04-23-10 copy.docx >> << File: DOC 260.050 Research Review and Use.pdf >>

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To: Herold-Prayer, Teri A. (DOC); Evans, Michael A. (DOC)
Cc: Dahlbeck, Ronald C. (DOC); Walls, Michael T. (DOC)
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Please feel free to contact me if you have any further questions.

Kris

<< File: E-mail Conditional IRB approval-Nora Marks.htm >> << File: NKMarks_Data_Use_Agreement.docx >>
Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary

Herold-Prayer, Teri A. (DOC)

From: Marks, Nora K. (DOC)
Sent: Tuesday, June 08, 2010 3:27 PM
To: Herold-Prayer, Teri A. (DOC)
Subject: FW: Data use agreement Marks

Teri: I apologize, I reread the Level II requirements and mine will follow under Level II status. I'll work on the form and return it tomorrow.

Thanks,
Kris

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LMHC, NCC
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Sent: Tuesday, June 08, 2010 3:14 PM
To: Herold-Prayer, Teri A. (DOC)
Cc: Dahlbeck, Ronald C. (DOC); Walls, Michael T. (DOC)
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I was under the impression this data would be considered archival data, so this is an unexpected development for me.

Any suggestions would be appreciated.

Kris

Herold-Prayer, Teri A. (DOC)

From: Daniels, David D. (DOC)
Sent: Wednesday, June 02, 2010 8:27 AM
To: Walls, Michael T. (DOC)
Cc: Herold-Prayer, Teri A. (DOC); Evans, Michael A. (DOC)
Subject: RE: Latest in the dissertation saga

http://insidedoc/usercontents/gmap/correctionalresearch.asp

The research application process can be found on this link; the application should be sent to Teri Herold-Prayer. Teri and Mike are available for questions.

From: Walls, Michael T. (DOC)
Sent: Wednesday, June 02, 2010 7:22 AM
To: Daniels, David D. (DOC)
Subject: RE: Latest in the dissertation saga

David, What would be the process for this piece of research?

From: Dahlbeck, Ronald C. (DOC)
Sent: Tuesday, June 01, 2010 2:38 PM
To: Marks, Nora K. (DOC)
Cc: Walls, Michael T. (DOC)
Subject: RE: Latest in the dissertation saga

It doesn't go to me. Mike?

Ronald Dahlbeck, Psy.D.
Correctional Mental Health Program Manager
Washington Corrections Center for Women

From: Marks, Nora K. (DOC)
Sent: Tuesday, June 01, 2010 2:28 PM
To: Dahlbeck, Ronald C. (DOC)
Subject: RE: Latest in the dissertation saga

The IRB just responded. They have reconsidered and will accept my process if the data is deidentified before leaving the facility, which of course, it would be. So, I have now asked them to tell me what we need on the data use agreement between DOC and myself. When that is established, and I get the IRB approval from Walden, I'll send my IRB application to WA. Does it go to you or to someone else?
Kris

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary
Units G and F
509/524-7516
Pager 522-7134

From: Dahlbeck, Ronald C. (DOC)
Sent: Tuesday, June 01, 2010 2:06 PM
To: Marks, Nora K. (DOC)
Cc: Walls, Michael T. (DOC)
Subject: RE: Latest in the dissertation saga

No, we haven't looked at the PAI's prior to this but if we are looking at an aggregate I don't see why informed consent would be necessary.

Mike, your thoughts?

Ronald Dahlbeck, Psy.D.
Correctional Mental Health Program Manager
Washington Corrections Center for Women

From: Marks, Nora K. (DOC)
Sent: Tuesday, June 01, 2010 1:13 PM
To: Dahlbeck, Ronald C. (DOC)
Subject: Latest in the dissertation saga

The IRB is making noises re: my access to non-deidentified data. Have you had other researchers look at the PAI's? Did they have to get a signed informed consent?

Nora "Kris" Marks MS
LMHC, NCC
Psychology Associate
Washington State Penitentiary